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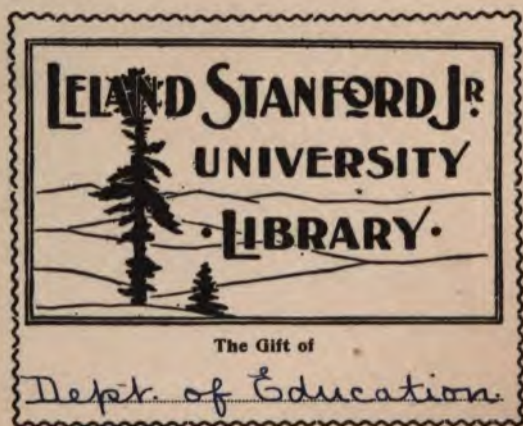
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AMERICAN PUBLIC SCHOOLS

HISTORY AND PEDAGOGICS

BY

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PREFACE

THIS book is intended mainly for the great body of American public school teachers, and, incidentally, for library use in normal schools or in normal departments of other institutions of learning, both public and private.

The prominence now given to American educational history by the pedagogical departments of universities has led to a similar line of study in many state normal schools. Furthermore, these historical studies have been emphasized during the past decade by a long series of able and exhaustive papers on the history of our public school system, published in the annual reports of the United States Commissioner of Education, and in special Bulletins of Information.

But these reports, rich in historical treasures, reach only a small number of the five hundred thousand teachers in our country, and are not available for practical purposes in large classes of normal students. There seems to be room for a hand-book containing a series of studies on the vital points of public school history ; and also an outline of the psychological and pedagogical methods of instruction and management in American public schools. A knowledge of the history of public education in our own country is fast becoming an indispensable part of

the educational equipment of every American teacher ; and it is to help along this new movement that the First Part of this book has been written.

The Second Part relates to applied pedagogics in the common schools, and treats specifically of modern courses of study in primary and grammar grades ; of school management ; of professional reading and study for teachers ; and of common-sense applied to rural schools. In this part, as in the historical part, the author has made free use of quotations from the latest writings of American educational leaders in order to show the drift of modern pedagogical and psychological thought.

JOHN SWETT.

SAN FRANCISCO, 1899.

CONTENTS

PART I. HISTORY OF AMERICAN PUBLIC SCHOOLS.

CHAP.	PAGE
I. Colonial Schools	7
II. Early American Schools	34
III. Secondary and Higher Public Education	73
IV. Public Schools after the Civil War	93
V. Common-School Courses of Study	118
VI. Studies on Common-School Text-Books	130
VII. Educational Outlook for the Twentieth Century.	164

PART II. APPLIED PEDAGOGICS IN AMERICAN PUBLIC SCHOOLS.

I. Management in School Government	173
II. Suggestions on Class-Room Management	179
III. Recitations and the Art of Using Text-Books	188
IV. Professional Reading and Study	199
V. Pedagogics Applied to Reading, Writing, Spelling, and Drawing, in Modern Graded Schools	206
VI. The Art of Teaching Language Lessons and Grammar	230
VII. Pedagogical Principles applied to Arithmetic	240

CHAP.	PAGE
VIII. Psychological Principles in Teaching Elementary History .	259
IX. Natural Methods in Teaching Geography	269
X. The Natural Method in Nature Studies	278
XI. Modern Views on Physical Culture	286
XII. Modern Training in Morals and Manners	292
XIII. Common-Sense Applied to Rural Schools	303

PART I

HISTORY OF AMERICAN PUBLIC SCHOOLS

CHAPTER I

COLONIAL SCHOOLS

FOR typical studies we may begin with the four chief centers of early settlements in our country : New England, New York, Pennsylvania, and Virginia.

The Colonists at Plymouth did not open a public school until fifty years after the Pilgrim Fathers set foot on Plymouth Rock. But the little band of one hundred and two men, women, and children that came over in the *Mayflower*, at once organized a civil government, and immediately set about paying off their indebtedness to the Plymouth Company by making shipments of fish, furs, and lumber. In thirteen years the freemen of this small settlement owned their homesteads free from debt. For half a century the few children in this colony of slow growth were taught at home or in dame schools to read the catechism and the Bible; for so much instruction the Pilgrims held to be a religious duty. In due time, when children had increased in numbers, the freeholders of the town of Plymouth set up a "Latin Grammar School" of the English type (1670); and three years later (1673) they established, after the manner of the Netherlands, where the Pilgrims had sojourned for a time, a public school for teaching the children to read and write their mother

tongue. For the public support of this school they applied the profits of the Cape Cod fisheries.

The Puritans who settled around Massachusetts Bay in 1630 were stronger in numbers and richer in means than the Plymouth Pilgrims. It is estimated that at least 20,000 emigrants came over from England during the period of rapid settlement from 1630 to 1650. The Boston Latin School (1635-36) appears to have been the first public school opened in New England. It was started by subscriptions, was supported in the beginning partly by town appropriations; afterwards entirely by the town. Sir Henry Vane headed the list of subscribers with a gift of ten pounds sterling.

"There is no notice of a school among the regular entries of Boston records until 1642," says Felt's "Annals of Salem," "but on the last leaf of the first volume is a list, dated 1636, of subscribers and their donations towards a school of this kind." This Latin School was exclusively designed to fit boys for college. It was the only public school in Boston for a period of more than thirty years. Harvard College was founded (1637-38) for the chief purpose of training up an educated ministry. One year later (1639), a printing press was set up at Cambridge.

Other towns in New England followed the example of Boston and established "Grammar Schools," chiefly designed to teach Latin grammar, but incidentally including a little instruction in reading, writing, and arithmetic. In order of time these schools were set up as follows: Charlestown (1636); Dorchester and Newbury (1639); Salem (1641); New Haven (1639-41); Hartford (1642); Newport, R. I. (1640); Dedham (1651); Ipswich (1642); Plymouth (1670).

These grammar schools were supported in part by tuition fees and in part by town appropriations. Occasionally they received small grants of land or individual bequests. They were public schools entirely under control of the civil government, though they had strong church affiliations. They were designed to fit boys for college. The girls of this period either attended private schools or grew up without schooling. As the settlers were transplanted Englishmen, their schools, as a matter of course, were modeled upon the plan of the eighteen Latin grammar schools founded in England during the reign of Edward VI. It was not until two centuries after the settlement of New England that Old England took any measures for providing for the elementary instruction of the children of the common people, other than in charity schools in connection with the established church. Consequently the colonists did not inherit the "common-school idea" from England.

The legal conditions of admission to all these primitive grammar schools read as follows: "No youth shall be sent to the grammar schools unless they shall have learned in some other way to read the English language by spelling the same." Consequently, for many years, children were taught to read at home, or in private schools, or dame schools, or were allowed to grow up illiterate. In due course of time most of these early grammar schools became free public schools supported by taxation, and, 150 years later, girls gained admission to them. Cotton Mather in his "*Magnalia*," says: "When scholars had so far profited at the grammar schools that they could read any classical author into English and readily make and speak true Latin, and write it in verse as well as in prose, and perfectly decline the paradigms of nouns and verbs in the

Greek tongue, they were judged capable of admission to Harvard College."

RECORDS OF GRAMMAR SCHOOLS.

The student of educational history must not be misled by the colonial use of the terms, "free school," "Latin school," "grammar school," and "public school." They were all used, at times, to designate public schools supported in part by tuition fees, and were also applied to schools under church control. It is claimed, for instance, that the first "free school" in America was established in 1621, by the Rev. Patrick Copeland, in Charles City, Virginia. This was evidently a parish school, supported by subscriptions.

Town of Dedham. — It was ordered in town meeting (1651) "that all such inhabitants in our town as have male children or servants in their families shall for each pay to the schoolmaster for the time being the sum of five shillings per annum; and (2) that whatever these sums shall fall short of the sum of twenty pounds shall be raised by by way of rateing upon estates according to the usual manner."

The Dorchester School. — The history of the town of Dorchester (now a part of the city of Boston) is of special interest, as it contains a record of one of the earliest of town meetings in New England.

Town Records.—"Monday, Oct. 8, 1633. Imprimis. It is ordered that for the general good and well ordering of the affairs of the plantation, there shall be every Monday before the Court, by 8 o'clock A. M., and presently by the beating of the drum, a general meeting of the inhabitants of the plantation at the meeting-house, there to settle and set down such orders as may tend to the general good aforesaid, and every man to be bound thereby, without gainsaying or resistance."

Other towns followed this example, and in 1636, three years later, the General Court of the Bay Colony passed an act regulating town government and establishing the town meeting as an institution of local civil government. The town meeting laid the foundation for the town school.

In 1635 the General Court of the Bay Colony granted to the inhabitants of Dorchester certain lands on "Thompson's Island," and in 1639 the town meeting voted to levy a tax on the proprietors of said island for "the maintenance of a school in Dorchester." This was a grammar school for boys, and was supported in part by tuition fees. So far as public records show, this seems to have been the first direct tax voted in New England for the partial support of a public school.

School Committee.—In 1645 the Dorchester town meeting elected a special school committee of three, termed "wardens or overseers of the schools," and adopted "rules and orders concerning the school," in part, as follows:

"2ly. That from the beginning of the first moneth untill the end of the 7th, hee shall every day begin to teach at seaven of the Clock in the morning and dismisse his schollers at five in the afternoon, and for the other five months he shall every day begin at 8 of the Clock in the morning and end at 4 in the afternoon."

"5ly. Hee shall equally and impartially receiue and instruct such as shalbe sent and Committed to him for that end, whither there parents bee poore or rich, not refusing any who have Right & Interest in the Schools."

"6ly. Such as shall be Committed to him he shall diligently instruct, as they shalbe able to learne, both in humane learning and good literature, & likewyse in Poynt of good manners and dutifull behaior towards all, specially there superiors as they shall haue occasion to bee in there presence, whither by meeting them in the streete or otherwyse."

"7ly. Euery 6 day in the weeke at 2 of the Clock in the after noone, hee shall Catechise his Schollers in the principles of Christian religion, either in some Catechism wch the Wardens shall provide and present, or in defect thereof in some other."

Schools in Boston.—In 1682, half a century after the settlement of the town, it was ordered in town meeting: "That a committee with the selectmen consider and provide for the teaching of children to write and cipher within this town." Accordingly, grammar schools were soon opened, with one department for teaching "writing and ciphering," and another department for teaching "reading and spelling." These unique schools, English in type, are explained by George H. Martin in his "Evolution of the Massachusetts Public School System," as follows: "These grammar schools were double-headed affairs, divided into a writing department and a reading department, and with a master and an assistant, the two masters having original and concurrent jurisdiction over the pupils. In the writing schools, arithmetic and penmanship were taught to all, while algebra, geometry, and bookkeeping were optional. In the reading schools, reading and spelling, with definitions, grammar, and geography were required studies, with history, astronomy, and natural philosophy optional. The pupils spent the morning in one school and the afternoon in the other."

These grammar schools of 1682, however, were open to boys only. It was not until 1789, a century later, that girls were allowed to enter them, and then only from April to October in each year, and only at hours when the boys were not in attendance.

It was not until 1818 that Boston opened primary schools for teaching both boys and girls to read and write

the English language. The town of Northampton voted in 1792 to admit girls into the grammar schools from May 1st to October 31st.

In this connection it is worth noting that in 1696 the Scottish Parliament enacted a law which established a school in every parish and provided for its support partly by parish tax and partly by rate bills. The way had been opened for this law by the work of John Knox, more than a century before, in establishing parish schools in connection with the Scotch Kirk.

Town of Salem.—This town, one of the first settlements in the Bay Colony (1629), ranked for a long period next to Boston in wealth and commerce. It held to English customs and educational ideas with peculiar tenacity. It established a British "Latin grammar school" in 1641; but made no public provision for teaching girls to read and write the English language until a hundred and fifty years later, and did not place girls on an equal footing with boys until 1812, one hundred and seventy-one years after the first Latin school was founded. It is historically interesting as the center of the witchcraft delusion in New England. Its school records, complete from the beginning, afford the pedagogical student a striking illustration of the slow evolution of the common school idea. These town records are made available by Felt's "Annals of Salem" (1845). In the first volume of this book there are eighty pages of public school history, made up largely of quotations from town records. The following extracts mark a few of the successive stages of school development.

Records.—"1641, March 30. Col. Endecot moved about the ffences and about a ffree skoole and therefore wished a whole towne meeting about it; therefore, that Goodman Auger warne a towne meeting the

second day of the weeke." The town meeting established a Latin Grammar School (1641) in accordance with the call.

1644. "Ordered that if any poore body hath children or a child to be put to school and not able to pay for their schooling, that the towne will pay for it by rate." This "free skoole" was a Latin grammar school, free only to those too poor to pay for instruction. "Such was the practice to a limited degree in the metropolis" (Boston), says the historian of Salem, "and, to a considerable degree, in other places of the Commonwealth. This continued, more or less so, among our population till 1768."

1657. "A bill came to hand to make a rate for the Coledge [Harvard] £5 6s."

1680, Apr. 5. "Concerning the Colledge money. For building : amount raised by subscription £130-2-3."

1716. "John Swinnerton began, 25th ult. to keep the English school by the town house." [First mention of an English grammar school].

1733, Jan. 4. "The Grammar School had 36, and the English school 30 scholars."

1743, May 11. "Voted that the Latin and English schools be united under a master and usher. Each Latin scholar paid 5s a quarter, and each English scholar 2s. 6d. a quarter."

1764, May 16. Order for £10, "to pay for learning the poorest children to read at women's schools" [dame schools].

1767, March 9. Committee of the English school are empowered to spend the same sum for a like purpose.

1793, March 11. School committee authorized to provide for the tuition of girls in writing schools or elsewhere, "in reading, writing, and ciphering."

1796, July 19. Statement that schools for young girls had been opened. [Primary schools.]

1801, April 13. "Notice is published, that writing, arithmetic, English grammar, composition, and geography are to be taught in the grammar school, besides Latin and Greek."

1801, May 2. Notice is published that three public schools for children of both sexes, and not less than five years old, are opened. [Primary schools.]

RURAL "COMMON SCHOOLS" IN NEW ENGLAND.

It was outside of Boston and its surrounding group of "grammar school" towns, in the outlying rural settlements of Massachusetts, Connecticut, and New Hampshire, that conditions were most favorable to the development of the colonial "common school." These pioneer settlers were a homogeneous people from the Puritan counties of England. They had no paternal government and no chartered companies to care for them; but they were well fitted to look out for themselves. The earnestness of their religious convictions held them up to high standards. They had no bitter contentions arising from differences in race, language, or religion; consequently, it was possible for them to act together in establishing town government and common schools. Like the Pilgrims, they were determined that their children should be able to read the Bible, the catechism, and the laws.

Driven by the "land hunger" characteristic of English pioneers, small groups of settlers pushed out into the forest wilderness of New England, and, in the face of Indians, secured home-farms, erected meeting-houses, and built schoolhouses. Presently the people, assembled in town meeting, elected a teacher, and started a school, supported in part from a scanty town treasury and in part eked out by voluntary subscriptions or tuition fees. The children were instructed in reading, spelling, writing, arithmetic, and good manners. The school was open to boys and girls on equal terms. The co-education of the sexes was not a theory; it was a condition of necessity. Pupils entered school at five years of age, and were allowed to attend up to the age of twenty-one. In these rural schools the main purpose was to teach the English lan-

guage, not the Latin. Rude and primitive schools they were, as befitted the pioneer conditions of a people fighting for survival among Indians, and wringing a scanty subsistence from a stubborn soil under a harsh sky.

These schools have an accurately recorded history written in town records of civil government. They were organized directly by the common people for the free public education of all children, without distinction of class, or caste, or sex. Of free charity schools for teaching the children of the poor, the history of the world is full. Of schools established for the higher classes by centralized paternal governments, there are numerous examples. But these rural schools were not copies of European schools. They were planned neither by educational theorists nor by speculative metaphysicians. Plato had taught, centuries ago, that in a commonwealth the working classes had no need of any education whatever. These Puritan farmers and mechanics had never read Plato in the original Greek ; but they had faith in God and themselves, and guided by hard common-sense, they saw to it that their children learned to read and write their mother tongue, and to cipher. Their schools were rightly named "common schools," because they brought together all the children of each little democratic community, on one common level of equal legal rights to an elementary education in the English language.

Many favorable conditions were combined to lead up to the organization of these schools. For defense against attacks of Indians the early settlers were grouped in villages surrounded by stockades. There was no established Church of England to monopolize education. Each little Congregationalist church was an independent organization, governed by its own members. For more than a century

the ministers as well as the teachers in rural towns were elected in town meeting. Consequently the ministers were strong in their support of free schools.

"These were the first lawgivers," said James Russell Lowell, "who saw clearly and enforced practically, the simple, moral, and political truth, that knowledge was not an alms to be dependent on the chance charity of private men, or the precarious pittance of a trust-fund, but a sacred debt which the commonwealth owed to every one of her children. The opening of the first grammar school was the opening of the first trench against monopoly in Church and State; the first row of trammels and pothooks which the little Shearjashubs and Elkanahs blotted and blubbered across their copy-books, was the preamble to the Declaration of Independence."

"The arts, sciences, and literature of England," said Daniel Webster, "came over with these settlers. That great portion of the common law which regulates the social and personal relations and conduct of men, came over also. The jury came; the *habeas corpus* came; the testamentary power came; and the law of inheritance and descent came also. But the monarchy did not come, nor the aristocracy, nor the church, as an estate of the realm. Political institutions were to be framed anew, such as should be adapted to the state of things."

It may be added to the preceding statements that the Pilgrims at Plymouth as soon as they organized civil government adopted the written ballot and the law which prevailed in Holland, but not in England, requiring a public record of land titles, deeds, and mortgages, as a protection against fraud, and for facilitating the transaction of business. The same rule was followed a little later by the Puritans of the Bay Colony. The Dutch settlers in New Netherlands adopted similar laws, which they brought with them from the republic of Holland.

The published records and special histories of several hundred towns in Massachusetts, New Hampshire, Connecticut, and Maine are now to be found in the state, city, and town libraries of New England. To the student of

educational history they furnish an account of the beginnings of the free American rural common school,—the most democratic institution known on the face of the earth,—a school under the control of the civil power, free to boys and girls alike, supported by a direct property tax voted by the people assembled in town meeting. The limits of this chapter will not admit of many extracts from original town records in proof of the preceding statements, but a few quotations will make luminous the origin of common schools.

HISTORICAL RECORDS OF COMMON SCHOOLS.

Town of Hampton (N. H.).—"On the 2 of the 2 mo., 1649. The selectmen of this Towne of Hampton have agreed with John Legat for this present yeare insueing—To teach and instruct all the children of or belonging to our Towne *both mayle and femaile* (wch are capiable of learning) to write and read and cast accountes (if it be desired) as diligently and as carefully as he is able to teach and instruct them ; And so diligently to follow the said imploymentt at all such time and times this yeare insueing, as the wether shall be fitting for the youth to com together to one place to be instructed ; And also to teach and instruct them once in a week, or more, in some Arthodox catechise provided for them by their parents or masters.—And in consideration hereof we have agreed to pay or cause to be payd unto the said John Legat the som of Twenty pounds, in corne and cattle and butter att price current, as payments are made of such goods in this Towne, and this to be payd by us quarterly, paying £5 every quarter of the yeare after he has begun to keep school.¹" This record was made ten years after the settlement of the town (1639). In 1670 the town record runs as follows : "That the Schoolemaster's Rate for this year shall bee Raised by Estates of the Inhabitants as other Towne Rates are." Hampton Academy was incorporated in 1810.

Town of Plymouth (Mass.).—1673. Ordered in town meeting "that the charge of the free scools which is three and thirty pounds a year shall be defrayed out of the proffits arising by the fishing at the Cape."

¹ Dow's "History of Hampton" (1893), Vol. I.

Town of Sanbornton (N. H.).—This town, settled in 1764, voted in 1774 "to hire a school teacher part of this year and raise \$30 for that purpose." Capt. Eben Sanborn, the teacher, was paid \$5.00 a month. He taught in a barn, and many of his pupils used birch bark as writing paper.

Town of Pittsfield (N. H.).—This town was settled in 1768, largely by emigrants from the town of Hampton. The following extracts from the manuscript records show that the custom of electing the teacher in town meeting had been kept up in parts of New England for more than a century. This record also illustrates the manner of electing ministers, which was common in parts of New England for more than a century. It further shows the natural development of the academy.

"1782.—*Voted.* To hire Jonathan Brown to teach a school for six months at nine dollars a month."

"*Voted.* To build a meeting-house of the same bigness of Hampton Falls meeting-house, except the posts to be one foot shorter."

"*Voted.* To raise some money this year for preaching, to be paid in corn, grain, and other produce."

1789.—*Voted.* Mr. Christopher Paige a salary of sixty-six pounds yearly, the one-third part in cash, and one-third part in corn at three shillings per bushel, and a third part in good beef at twenty shillings per hundred, during his ministry in said town."¹

Forty years after the preceding record the farmers of this small town of less than a thousand inhabitants contributed labor, lumber, and money; erected a building; and established an undenominational academy. This institution had no endowments, no apparatus, and no library. The successive preceptors of the school were young graduates of Dartmouth College, who were study-

¹ Original unpublished records of the town of Pittsfield.

ing law, medicine, or theology. But this almost unknown academy, typical of many others, made a good record. It sent many students to college. Of its farmer-boy students, one became a United States senator from his native state; another a judge of the Supreme Court; a third, a judge in the Supreme Court of Minnesota. A large number studied law, many became teachers, and still more became successful business men in the various pursuits of life. More than half of the young men moved West, and a few reached California. Half a century after its foundation the academy was transformed into a town high school.

Dame Schools.—These schools, both in England and New England were small private schools set up by women, generally in their own homes, for teaching young children to read in the primer or catechism. In most of the grammar-school towns the dame schools, for a century or more, fitted the boys for admission to the Latin schools, that is to say, taught them "to read the English language by spelling the same." It was in such schools that the little girls learned to read; but girls were not allowed in the sacred precincts of the grammar school until about the beginning of the nineteenth century. In the course of time, some of the towns began to aid these private dame schools by small subsidies as an encouragement to continue their good work. Next, one town after another began to employ teachers at a regular salary. This innovation was the beginning of the modern primary school.

The town of Woburn (1641) agreed to pay Mrs. Walker ten shillings for the first year. In 1673 the town records show that two "dame teachers" were paid a total sum of ten shillings, or five shillings each, for the year. But

these "dame teachers" undoubtedly collected the conventional tuition-fee for supplementary support.

Town of Springfield (Mass.) — 1682. "The Selectmen agreed with Goodwife Mirick, to encourage her in the good work of training up of children and teaching children to read, that she should have 3d. a week for every child that she takes to perform this good work for."

Town of Hadley (Mass.). — 1749, March 13. It was voted that the committee should "hire three School Dames for three or four months in the Summer season to learn children to read." In 1752 it was voted that "30 pounds be improved to hire a scool master all the fall of the year; and that the other 30 pounds be improved to hire Scoole Dames in the Summer."

Town of Salem (Mass.). — "1764, May 16. Order for £10 to pay for learning the poorest children to read at women's schools."

"1771, Feb. 12. Widow Abigail Fowler, a noted 'school dame' finished her earthly labors. She was in her 68th year, and began to teach children before she was 18, and continued so to do till her decease, with the exception of a few years after she was married."

Education of Girls. — The records of the town of Hampton (N. H.), 1649, show that the first school established there was open to "all the children of or belonging to our town, *both male and female*." In most of the rural town or district schools established after that date in New Hampshire and the small rural districts of Massachusetts the schools were open to both girls and boys. The grammar-school towns lagged far behind the rural districts in providing for the education of girls, seeming to have been content with English precedents.

Town of Salem (Mass.). — 1812, June 11. The historian of this town quotes from the records of this date as follows: "In the four public schools for English there are 465 boys and 295 girls. The latter attended, as usual, an hour at noon, and another in the afternoon. The Grammar school (Latin) had 40 pupils." To the credit of this town it may be here stated that 13 years later when it had become an incorporated city, two high schools were opened, one for boys and another

for girls. "At this time," says the historian, "the tuition of females for an hour each day during a part of the year at the masters' schools seems to have been relinquished."

COLONIAL SCHOOL LAWS IN NEW ENGLAND.

Turning to legislative records, we find that in 1642 the General Court of Massachusetts enacted that the selectmen of every town "should have a vigilant eye over their brethren and neighbors to see that none of them shall suffer so much barbarism in any of their families as not to endeavor to teach by themselves or others, their children and apprentices so much learning as to enable them to read perfectly the English tongue, under a penalty of 20s for each neglect therein." The Connecticut code of 1650 contained a similar provision.

The General Court of the Plymouth Colony (1658) proposed "unto the several Townshipes of this Jurisdiction, as a thing they ought to take into their serious consideration, that some course may be taken that in every Towne there may be a schoolmaster sett up to traine up children to reading and writing."

In 1677, the General Court of the Plymouth Colony made the following order: "That in whatsoever Townshipe in this Government, consisting of 50 families or upwards, any meet man shall be obtained to teach a Gramer Scoole, such townshippe shall allow at least twelve pounds in currant merchantable pay, to be raised by rate on all the inhabitants of such towne, and those that have the more immediate benefit thereof by their children's going to school, with what others may voluntarily give to promote so good a work and general, shall make up the residue Necessarie to maintaine the same; and that the proffits of the Cape ffishing heretofore ordered to maintain a Gramer Scoole in the colonie be distributed to such towns as have Gramer Scooles, for the maintainance thereof," etc.

The Massachusetts Colony law of 1647 required every town of fifty families or upwards to appoint a teacher to instruct children in reading and writing; and every town of one hundred families "to set up a grammar school, the expense to be borne by the town or by the parents as the town may determine." This was only a legal recommendation, as no penalty was attached for not carrying it into effect. The Connecticut Colony law passed a few years later (1650) enacted that every town having seventy householders, or upwards, should maintain a school for eleven months each year, and that a grammar school should be set up in every head or county town. For the support of such schools a tax of forty shillings "upon every thousand pounds in the lists of the respective towns" was levied and collected by colonial law.

The New Haven Code (1656) ordered "That all Parents and Masters doe duly endeavor, either by their own ability and labour, or by improving such Schoolmaster, or other helps and means, as the Plantation doth afford, or the family may conveniently provide, that all their Children and Apprentices, as they grow capable, may, through God's blessing, attain at least so much, as to be able to read the Scriptures and other good and profitable printed Books in the English tongue, being their native language, and in some competent measure, to understand the main grounds and principles of Christian religion necessary to Salvation."

COLONIAL SCHOOLS IN NEW YORK.

The Dutch West India Company established trading posts on Manhattan Island and at various other points in the province of New Netherlands, a few years before the English made a lodgment in New England. The church and the school were established together. These sturdy republicans brought with them some of the best of the

civil institutions of Holland ; such as the written ballot, public records of land titles and legal documents, and elementary schools for the education of the children of the common people. In 1633 Adam Roelandsen was sent over from the mother country to take charge of the school in the town of New Amsterdam on Manhattan Island. This first public school with an established record was called " The School of the Dutch Reformed Protestant Church." It is still in existence in New York city, and is claimed to be the oldest school in the United States.

Dutch Colonial Schools. — Schools were opened at Albany (1650) ; Flatbush (1659) ; Brooklyn (1661). In the town of New Amsterdam a Latin grammar school, or classical school, was established in 1659 and was supported partly by tuition fees and partly by taxation. These early schools seem to have been chiefly managed by the Dutch Reformed Protestant Church ; but as the town settlements grew stronger the schools were maintained, in part, or entirely, by public moneys. The tendency was in the same general direction as in the rural settlements in New England, that is, towards providing elementary instruction for the many rather than a training in Latin for the few. Instruction was given in reading and writing the Dutch language, in arithmetic, in the catechism of the Dutch Church, and in the Bible. Those early settlers, like the Pilgrims and Puritans, highly prized the right to read the Bible and to worship God according to the dictates of conscience. They held in living remembrance the long and bloody war which their ancestors had waged against Spain, and in defense of civil and religious liberty. These colonists from Holland brought with them advanced ideas about elementary schools for the education of the common people. At this time the republic of

Holland was the leading nation of Europe in commerce, industries, civil liberty, and the general education of its people.¹

English Schools.—But this province was seized by England in 1664, and the Dutch schools were arrested in development. Under English rule the royal governors were unfriendly to schools that were not under the protecting care of the English Church. They vetoed several attempts to establish common schools managed directly by the people. They established several Latin grammar schools, and founded (1754) King's College, now Columbia University. One governor, in a letter to the home government, urged a charter for King's College in the town of New York, "not only on account of religion, but of good policy, *to prevent the growth of republican principles which already too much prevail in the colonies.*" During the reign of King James, the colony was forbidden to have a printing press.

Meantime, the strongest of the Dutch colonial schools maintained a lingering existence under teachers selected by the Dutch Reformed Church, a right guaranteed to them under the terms of surrender in 1664. Thus for a long period there were two rival sets of public schools; one class under the control of the Church of England, the other governed by the Dutch Reformed Protestant Church. Both were eventually fused into a composite system of free common schools. For a century, however, "The Society for the Propagation of the Gospel in Foreign Parts," under the auspices of the Church of England, looked after the establishment of parish schools, which were mainly supported by tuition fees. From 1704 to

¹ See Motley's "Dutch Republic," also Campbell's "The Puritan in Holland, England, and America."

1776 this society established twenty-one schools. These schools provided for the education of a part of the children, but not for all. They were good in their way, and were the natural development of civil and political conditions.

The common-school record of New York, chiefly made up after the adoption of the Constitution, will again be considered in a succeeding chapter. "We must be content for the present," says Andrew S. Draper, "with the statement, which is abundantly supported by the facts, that under the mistaken policy of the English rule, the schools languished, and during the progress of the war for independence which raged with great fierceness over our territory, they were nearly or quite obliterated. The fury of war had closed the doors or entirely extinguished the single college, and, practically, all the academies and schools."

But the Dutch and the English schools together trained up several generations into a patriotic people. During the Revolutionary War New York supplied her full quota of troops and answered all requisitions of the Continental Congress for money. The descendants of the Dutch settlers proved themselves worthy of their ancestors in Holland who had defied the power of Spain, and established a Dutch republic. English Puritans and Dutch Puritans stood together for independence.

COLONIAL SCHOOLS IN PENNSYLVANIA.

William Penn sent the first colony of English Quakers to Philadelphia half a century after the Pilgrims settled at Plymouth. The desire for religious liberty led to the foundation of Pennsylvania as well as to that of New

England. The tolerant government of the province soon attracted great numbers of Scotch-Irish Presbyterians, German Lutherans, Swedish Lutherans, Dutch Mennonites, Moravians, English Episcopalians, and Catholics. In 1685 only about half the inhabitants were of English descent. The Scotch-Irish, driven from the north of Ireland by the decay of the linen industry, came in great numbers, and the German immigration from the Palatinate was large. The population of the province rose from 20,000 in 1701 to 250,000 in 1749. It has been estimated that at the beginning of the Revolution about one third of the population of Pennsylvania was of Scotch-Irish stock.¹

Parish Schools.—It was impossible for these divergent peoples to act together in organizing public schools. Consequently education was provided for by typical parish and "society" schools under the control of zealous religious sects. These sectarian schools were supported by tuition fees, though the children of the poor were sometimes admitted as free charity or pauper pupils. They educated a part of the children, but not all. It was not possible at that time for the people to conceive of schools disconnected from church or society control. But the Scotch-Irish Presbyterian schools and the German schools educated their children to some purpose; for this fighting stock contributed a majority of the Pennsylvania quota of troops during the Revolution. In Pennsylvania one third of the population was made up of Quakers who had conscientious scruples against bearing arms. The fighting men of this state came chiefly from the Scotch-Irish and the Germans.

¹ "The Puritan in Holland, England, and America," by Douglas Campbell (1892).

The Provincial Council in 1683, on the 16th of October established a private school by the following enactment :¹

"The Governor and Provincial Council having taken into their serious consideration the great necessity there is of a School Master for ye instruction & Sober Education of youth in the towne of Philadelphia, sent for Enoch Flower, an inhabitant of the said towne who for twenty years past hath been exercised in that care and employment in England, to whom having communicated their minds, he embraced it upon the following terms : To learn to read English, 4s by the Quarter, to learn to read & write and cast accounts, 8s by the Quarter ; for boarding a scholar, that is to say, diet, washing, lodging, and schooling, ten pounds for one whole year."

Friends' Public School. — A grammar school was chartered by the Council in 1689 "at the request, costs, and charges of the people called Quakers." This school is still in existence as the "Friends' Public School." The petitioners stipulated to instruct the rich at reasonable rates, the poor to be "schooled for nothing." "With a few legislative resolutions," says Dr. J. P. Wickersham in his "History of Education in Pennsylvania," "none of which were in the direction of the common school idea, the historian of this colony may dismiss the consideration of education for well nigh a hundred years."

Benjamin Franklin, remembering his three years' course in a Boston grammar school, made a resolute endeavor to educate popular opinion up to the point of establishing free common schools, but he failed as Jefferson afterwards failed in Virginia. He succeeded, however, in securing a chartered academy in Philadelphia (1755), with the three departments of charity school, academy, and college. This triple school eventually was developed into

¹ Quoted from Dr. Blackmar's "Bulletin of Information," Bureau of Education, 1890.

the University of Pennsylvania, and Franklin's school itself was a modified form of Penn's grammar school of 1697. It was not until after the adoption of the Constitution that any real headway was made in establishing public schools, and even then progress was slow.

COLONIAL SCHOOLS IN VIRGINIA.

The English settlers in Virginia, and their descendants for more than a century and a half after the settlement of Jamestown (1607), were content with private tutors and parish schools established by the Church of England, supplemented by a few grammar schools, academies, seminaries, and the College of William and Mary. All of these schools were supported chiefly by tuition fees. They taught the children whose parents could afford to pay for an education, and left large numbers in the rural districts with little or no schooling. In Virginia the system of land tenure, the absence of town government, a scattered rural population, the parish schools of the Church of England, and the institution of slavery,—all stood in the way of public schools for nearly two centuries. In early colonial times (1671) Governor Berkeley placed himself on record as a bluff old English Tory by declaring: "I thank God there are no free schools or printing, and I hope we shall not have them these hundred years." Virginia was filled up by a homogeneous people from England, strong in their attachment to the Established Church. They clung to the civil institutions of England with extreme tenacity until long after the Revolution.

George Washington was taught to read and write and cipher in a parish school. He was taught surveying by a private tutor. He was trained to arms in the French and

Indian War, and was the one man in all the colonies best fitted to command the Continental Army, and to organize civil government as first president of the United States.

In 1776, Thomas Jefferson retired from the Continental Congress and became a member of the legislature of Virginia. By his efforts the laws of entail, primogeniture, and the union of Church and State were removed from the statute books ; but the hostility of the ecclesiastical and landed interests proved an impassable barrier to his earnest efforts in behalf of a system of public schools. The "old field schools," supported by tuition fees, were considered to be sufficient for the common people.

But the work of the early educational institutions of the Old Dominion must not be underrated. They gave to the new republic great statesmen like Washington, Jefferson, Madison, Monroe, and Patrick Henry, and sent into the Continental Army a body of patriotic soldiers worthy of their great commander-in-chief.

SLOW COLONIAL PROGRESS.

During the first century of settlement the colonists were mainly engaged in fighting the Indians, subduing the wilderness, and organizing civil government. In the second century there came the deadly contests with the French and Indians, soon after to be followed by the long and desperate struggle for independence. During much of this period the people guarded their homes, their churches and their schools with musket always at hand. Without compunction they exterminated Indians, for otherwise they themselves would have vanished from off the earth. Taxation was heavy ; the people were poor ; and educational progress was of necessity slow and irregular. But it was

during this very period of neglect by the mother country and misrule by royal governors, that in New England the common schools took root and grew strong. Almost from the beginning these schools were kept under direct control of town officers, or under the decision of a general town meeting, or the democratic vote of a school-district meeting. If in the beginning the schools were enveloped in an atmosphere more or less ecclesiastical, it should be remembered that deep religious convictions constituted the strength of Puritan character. If at first the right of voting was limited exclusively to church members, the elective franchise was soon extended to all town freeholders. If some of the schools at first were partly supported by tuition fees, they soon became free, and at all times received pupils without distinction of class or caste, and, in rural districts, without distinction of sex. The fact that these primitive common schools survived in the struggle with private schools and denominational institutions proves their adaptation to the needs of a free people.

The Colonial Crisis. — For more than a century these schools gave to the great mass of the common people a fair elementary education. Then there came the great colonial crisis which summoned men to arms against the oppression of the mother country. The minute-men who rushed into battle at Lexington, and Concord, and Bunker Hill, had been trained to arms in the French and Indian War, and drilled into intelligent patriots in the common schools. They knew what they were fighting for. These "embattled farmers" stood by Washington in the siege of Boston, and drove out the British troops and a thousand colonial "tories," who sailed away to Halifax on board the British fleet. They followed their great commander to New York, and Trenton, and Valley

Forge. They enlisted for the war in the Continental Army, and when, after the final triumph at Yorktown, that army was disbanded, they constituted, according to the records of the war department, a majority of the rank and file of the veterans of the war. No wonder the great Virginian exclaimed: "God bless the New England troops!"

But the New England troops did not stand alone in the long battle for independence. The Continental Congress, on the 14th of June, 1775, made the beginning of a regular army by enacting "that six companies of expert riflemen be immediately raised in Pennsylvania, two in Maryland, and two in Virginia. These were the first troops levied by direct act of Congress. It was a call to frontiersmen of the Alleghanies who were experts in the use of the famous backwoods rifle, and were trained in Indian warfare. The hardy pioneers of western Pennsylvania had met in a public meeting at Hanover, June 4, 1774, and passed defiant resolutions, the last of which read as follows: "4th. That in the event of Great Britain attempting to force unjust laws upon us by the strength of arms, our cause we leave to Heaven and our rifles."

"On the 18th of July, 1775, the first company of riflemen, Nagel's Berks County 'Dutchmen', arrived at Cambridge, and within less than sixty days from the date of the resolution of Congress, 1430 backwoodsmen, instead of the 810 required, had been raised, equipped by themselves, and had joined the army before Boston, after marching from four to seven hundred miles over difficult roads—all without a farthing being advanced by the Continental treasury." ¹

¹ "The Birth of the American Army," by Horace Kephart, Harper's Magazine, May, 1899.

The riflemen of Western Virginia and Maryland responded to the call with equal promptness. Daniel Morgan, just returned from an Indian war, led the Virginians.

"About two-thirds of the riflemen were of Scotch-Irish descent," says Kephart, "and nearly all of the remainder were 'Pennsylvania Dutchmen'—that is to say, of Swiss or Palatine origin. Many of the Marylanders and Virginians were immigrants from western Pennsylvania. The famous rifle corps which Morgan afterwards formed from marksmen picked from the whole army is usually referred to as 'Morgan's Virginians,' but, as a matter of fact, two thirds of them were Pennsylvanians, including a considerable number of Pennsylvania Germans. . . . When Washington, one day riding along his lines, saw the fringed hunting-shirts of the Virginians approaching, the reserve of his naturally undemonstrative nature broke down. At the sight, he stopped; the riflemen drew nearer, and the commander, stepping in front, made the military salute, exclaiming, 'General, from the right bank of the Potomac!' Washington dismounted, came to meet the battalion, and going down the line with both arms extended shook hands with the riflemen one by one, tears rolling down his cheeks as he did so."

These hardy sharpshooters did effective service in the siege of Boston. They enlisted in the Continental Army and fought during the war or fell on the field of battle.

CHAPTER II

EARLY AMERICAN SCHOOLS

THE seven years' war for independence was a trying time for the people of the new republic or confederation. Boston, New York, and Philadelphia were successively occupied by British armies. Commerce was interrupted or suspended, taxation was high, and "hard times" everywhere prevailed. From the close of the Revolutionary War to the ratification of the Constitution and the inauguration of Washington, there was also a seven years' period of political unrest, of scarcity of coin and superabundance of depreciated paper money, of high taxation, of general poverty and dissatisfaction.

A general census taken in 1790, one year after the final ratification of the Constitution by nine states, showed the population of the United States to be 3,929,000. At this time Virginia had 747,000 inhabitants, or about one-fifth of the entire population of the whole country. Massachusetts, including the Province of Maine, had, in round numbers, a population of 475,000; Pennsylvania, 434,000; North Carolina, 394,000; New York, 340,000; Maryland, 320,000; South Carolina, 240,000; Connecticut, 238,000; New Jersey, 184,000; New Hampshire, 142,000; Rhode Island, 69,000; Georgia, 82,000; Delaware, 59,000; Kentucky (soon after admitted) 74,000; and Vermont, 85,000.

The New England States together had a population of a little more than one million; the four Middle States had a little less than a million; and the Southern States footed up 1,657,000 inhabitants, including negro slaves as "persons."

In 1786, four years before this first general census, the

population of the three great commercial cities of the country ranked as follows: Philadelphia, 32,205; New York, 24,500; Boston, 14,640. At the beginning of the Revolution the population of the colonies was estimated at 2,750,000; at the close (1783) 3,250,000.

The preceding statistics will show, in part, the general conditions under which the several states began to turn their attention to the organization of public schools. At this time there were in this country no steamboats, no railroads, and no canals. Roads were bad, and land transportation was slow and costly. A few small cotton mills and woolen mills in Massachusetts and Rhode Island had just been set up with rough imitations of the spinning and weaving machinery used in England. Arkwright's great invention of the spinning-jenny had been jealously guarded by the British government, and it was not until eighteen years afterwards that the first rough drawings were secured in America. At length, William Somers, of Baltimore, went to England and brought back models and descriptions of machines for carding and spinning wool. He applied to the legislature of Massachusetts for aid in setting up his models, and was granted \$100 for that purpose. Application was also made in behalf of two Scotchmen by the name of Barr, who had some knowledge of the spinning-jenny. "The General Court voted to the Barrs," says John Bach McMaster, "six tickets in a State Land Lottery, and out of the money they drew, the first stock-card and spinning-jenny in the United States was made. It was not, however, till Washington had been one year president that Samuel Slater put up, in the workshops of Almy & Brown, the first series of machines worthy to be called copies of the famous inventions of Arkwright."

¹ McMaster's "History of the People of the United States."

Thus were made the beginnings of cotton factories and woolen mills, that soon brought about a radical change in the industrial conditions of New England, and led up to the rapid growth of cities, towns, and villages, and an era of unexampled financial and commercial prosperity. These new industrial conditions, in turn, soon led to a corresponding development of common schools. About this time, also, there came the invention of the cotton-gin by Eli Whitney, of Connecticut (1792), which greatly stimulated the production of cotton, and laid the foundation of the wealth, power, and prosperity of the cotton-growing states of the South. In 1786, the Continental Congress formally adopted a decimal system of currency, but the people were reluctant to change their local customs and usages in money matters. The act creating the United States Mint was not passed until 1792, and the first regular issue of money was the copper cent of 1793. Meantime all kinds of European coins, bogus coins, and depreciated paper money, were used as a circulating medium. The United States Patent Office was established by act of Congress, April 10, 1790, and to Thomas Jefferson is due the honor of securing it.

After the adoption of the Constitution, the inauguration of Washington, and the funding of the national debt by the wise policy of Alexander Hamilton, the Secretary of the Treasury, the new nation entered upon an era of great industrial prosperity and rapid expansion of territory. The people had cut loose from the civil government of the mother country, and from English educational ideals. Colonial schools began a slow evolution into an American system of public schools adapted to the changed civil conditions under a republican form of government. The separation of State from Church was fol-

lowed by the gradual release of schools from denominational control. Within a decade after the inauguration of Washington, new constitutions were adopted by eight states, in which the right of suffrage was greatly extended, and religious tests were either modified or abolished. The war of 1812-15 greatly intensified the American democratic spirit, especially in the valley of the Mississippi.

State Control of Schools. — The new Constitution contained no section on public education. Educational conditions in the thirteen original states were so divergent that it would have been impossible for the delegates in the Constitutional Convention to agree on any educational provision. At this period the idea of universal education had not entered into the minds of statesmen. Thus the maintenance of public schools was left as a matter of state rights. Of the state constitutions that were framed soon after the Declaration of Independence, only five mentioned education, and only two contained school provisions of any practical value. Thus the establishment and maintenance of schools were left to enactments by state legislatures. These enactments, in turn, were at first only general outlines, so that the direct government of the schools was long left, as in colonial times, mainly to the local regulations of city, county, town, or district,—that is, under immediate control of the people.

LAND RESERVATIONS FOR SCHOOLS.

The Old Northwest. — Virginia (1784) ceded to the general government her shadowy title to wild lands extending westward to the Mississippi, with the exception of the Virginia Military Bounty Lands in the Northwest Territory. Connecticut yielded her claims, with the ex-

ception of the Western Reserve. New York, Pennsylvania, Massachusetts, North Carolina and South Carolina, Maryland and Georgia, one by one reluctantly gave up their somewhat indefinite claims to other parts of the western wilderness. It consequently became necessary for Congress to outline a plan for governing this vast extent of territory and for disposing of the public lands. Fortunately for common schools and state universities the policy pursued was wise and far-reaching.

The ordinance of 1787, entitled "An Ordinance for the Government of the Territory of the United States Northwest of the River Ohio," passed July 13, by the Continental Congress, established the territory as one district, but provided for its future subdivision into "not less than three nor more than five states." It prohibited primogeniture by providing that the estates of deceased persons should "descend to and be distributed among their children and the descendants of a deceased child in equal parts;" and secured to the widow of the deceased "her third part of the real estate for life, and one third part of the personal estate." And "for extending the fundamental principles of civil and religious liberty, to fix and establish those principles as the basis of all laws, constitutions, and governments, which forever hereafter shall be formed in the said territory," it ordained a bill of rights in six articles.

Article First declared that no "person demeaning himself in a peaceable and orderly manner shall ever be molested on account of his mode of worship or religious sentiments, in the said territory."

Article Second secured the writ of *habeas corpus* and the right of trial by jury; and declared that "No law ought ever to be made which should interfere with or affect private contracts or engagements, *bona fide*, and without fraud, previously formed."

Article Third declared that "Religion, morality, and knowledge, be-

ing necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged."

Article Sixth, most important of all for the future of the United States, read as follows: "There shall be neither slavery nor involuntary servitude in the said territory, otherwise than in the punishment of crimes, whereof the party shall have been duly convicted: *Provided, always,* That any person escaping into the same, from whom labor or service is lawfully claimed in any one of the original states, such fugitive may be lawfully reclaimed and conveyed to the person claiming his or her labor or service as aforesaid."

Ten days after the passage of this famous ordinance, there was passed a supplementary act relating to the survey and sale of public lands, *which reserved the 16th section (640 acres) of each township for the support of common schools*, and also set apart two townships (46,080 acres) "to be given perpetually for the purposes of a seminary of learning [or university], to be applied to the intended object by the legislature of the state." This reservation of two townships in each future state for university purposes was secured, largely, through the efforts of Nathan Dane, Rufus King, Rufus Putnam, and Manasseh Cutler.

Land System.—The beginning of the present land system of the United States had been made two years before, by act of Congress (May 20, 1785), under which government land was to be surveyed in townships of six miles square, laid off by meridian range lines and parallels of latitude. Each section included 640 acres, and each township 36 sections, or 23,040 acres. This land was to be sold for one dollar an acre, in tracts of not less than one entire section of 640 acres. Section 16 of each township was to be reserved for common-school purposes, which provision was secured by Rufus King, a member of the Congressional committee, at the suggestion of Timothy

Pickering.¹ The committee report also contained a reservation of one section in each township for the purposes of religion, but this was stricken out by Congress. This reservation of the 16th section for common schools was

6	5	4	3	2	1*
7	8	9	10	11	12
18	17	†	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

DIAGRAM SHOWING THE DIVISION OF A TOWNSHIP.

* Section.

† School Section.

reaffirmed in the land act of July 23, 1787, and supplemented by the reservation of two entire townships in each new state to be formed out of the Northwest Territory, for university purposes. The sale of public lands was a vexed question in Congress until May 20, 1800, when a land act was passed on the recommendation of William Henry Harrison, then a delegate from the Northwest Territory. Among other things, this law provided that public lands should be sold at two dollars an acre, but only one twentieth was to be paid down at the time of purchase the remainder to be paid in installments running through five years. This act also provided for the opening of four government land offices in the western territory. Half a century later (1848) Congress enacted that in states thereafter formed the 36th section, in addition to the 16th section, should be reserved for common school purposes.

¹ See McMaster's "History of the People of the United States," Vol. III.

The supplementary act of July 23, 1787, is often referred to as a part of the ordinance of 1787, passed ten days before, on July 13th. It became a precedent for the rule afterwards followed in the organization of new states, though in a modified form after 1889.

The passage of this ordinance was hastened, if not absolutely secured, by the demands of the disbanded veterans of the Continental Army, who had been paid off in certificates of indebtedness worth ten or twelve cents on the dollar. They had returned to their homes poor.

In 1786 General Rufus Putnam and General Benjamin Tupper, both veterans of the Revolution, organized an association under the name of the "Ohio Company" and issued a circular addressed to officers and soldiers of the late army who might be, under the ordinance of Congress, entitled to lands in the Northwest Territory. The purpose of the Ohio Company was to raise a fund, not to exceed one million of dollars, in depreciated continental certificates, and with it to purchase and settle a tract of land in the "Ohio Country." Putnam, Parsons, and Manasseh Cutler were made directors. Brigadier General Rufus Putnam was a graduate of a New England common school who had been successively a blacksmith, a millwright, an engineer, and an able military officer during the Revolution. Dr. Manasseh Cutler started in life as a lawyer, then became a clergyman, an educator, and a shrewd business and political agent. Parsons and Cutler went on to New York city to make a business proposition to the Congress there in session.

The members of Congress, anxious to sell the public lands, lent a ready ear to the claims of veterans of the war who wished to buy and settle on a part of the public domain. Cutler and Parsons proposed to buy one and a

half million acres for one million dollars, to be paid for in government certificates at par value.

But the conditions exacted were that civil rights should be guaranteed in the territory, and that *slavery should be prohibited*. The committee, consisting of Carrington and Lee of Virginia, Nathan Dane of Massachusetts, Kean of South Carolina, and White of New York, reported a bill which was amended by the sixth article, prohibiting slavery, offered by Nathan Dane, and was passed by Congress, July 13, 1787, with only one dissenting vote, and that vote was from the state of New York. The states that voted in favor of the sixth article were Massachusetts, New York, New Jersey, Delaware, Virginia, North Carolina, South Carolina, and Georgia. When the land contract was finally concluded with the officers of the Treasury, it included the sale of five millions of acres at two thirds of a dollar an acre, of which the Ohio Company took a million and a half acres, and other land operators secured three and a half millions of acres.¹ As United States certificates of debt were worth at that time only twelve cents on a dollar, the cash price in this great land transaction was eight or nine cents an acre. But it proved a good bargain for the United States.

After the passage of this Magna Charta of land ordinances, the disbanded veterans of the Revolution took up their peaceful line of march into the wilderness of the Northwest Territory. The first band of settlers from New England numbered only forty-seven, not quite half the number of Pilgrims that landed at Plymouth 167 years before. Under the leadership of Rufus Putnam this little company of pioneers started in November,

¹ For details of this transaction, see "McMaster's History of the People of the United States," Vol. I.

wintered thirty miles above Pittsburg on the banks of the Youghiogheny River, built a flat boat which they named the "Mayflower," and early in April, floated down the Monongahela into the Ohio, and landed in the wilderness of the West, as their ancestors had settled the wilderness in the East. Dr. Manasseh Cutler soon despatched a second party of settlers who followed in the wake of Putnam and united with the first expedition in the settlement of Marietta in Ohio. These pioneers carried town government and the common school into the Northwest Territory and founded a "Greater New England" in the heart of the Mississippi Valley. The eastern contingent was swelled by veterans of the Revolution from New York, Pennsylvania, Virginia, and North Carolina. It is estimated that ten thousand emigrants poured into the Ohio region during the year 1788; and in ten years it was fortified by log schoolhouses and made sure forever to free labor.

SCHOOLS IN THE NORTHWEST TERRITORY.

Ohio became a state in 1802; Indiana in 1816; Illinois in 1818; Michigan in 1837; and Wisconsin in 1848. In these states the school land reservations were not immediately available, but the recognition of public schools by the general government greatly stimulated the educational efforts of pioneer settlers. The money to pay the first teachers at Marietta, in Ohio, was sent on from Massachusetts by Dr. Manasseh Cutler. The first state school law in Ohio (1821), was modeled after that of New York. It provided for the subdivision of townships into districts, the appointment of school committee men, and the levying of rate bills. Four years later (1825), the law was re-

vised, and provision was made for levying a county tax for school purposes. In 1837 a state superintendent of schools was appointed by the legislature. In 1853 a law was enacted making each township a school district, and creating a township board of education. This board was authorized to establish a high school in each township upon a majority vote of the people, and to levy a tax for its support not to exceed two mills on the dollar. As a result of this town provision, Ohio ranks as one of the foremost states in respect to the number and excellence of high schools. The other states of this territory developed their school systems later in time, but after the manner of Ohio. All had the usual number of private and denominational schools and colleges, but these were soon overshadowed by the rapidly developed common schools and high schools. Here, as in all the other new states of the West and the Pacific Coast, public education proceeded from the common school upward to the high school, and, finally, to the college and the free state university. The precedents of both Old England and New England were in a measure reversed. Up to this time it had been generally believed that the only possible scheme of education began with the foundation of the college or the university for educating the professional classes, which was afterwards to be extended downward through the Latin grammar school to the parish school, the charity school, or the common school for the mass of the people.

SCHOOL LEGISLATION IN NEW ENGLAND.

Taking up once more the subject of common schools in New England, we find that the Massachusetts law of 1789 required "every town of one hundred families or upwards to maintain one school six months in the year, or two or

more schools for terms that should together equal six months." Towns of two hundred families and upwards were also required to maintain a grammar school. This law required instruction in "orthography, reading, writing, the English language, geography, and decent behavior." It ordained that the masters or mistresses of schools for primary instruction should be approved in respect to character and qualifications. It provided for official examinations of schools by the ministers, the selectmen, or a special school committee. It authorized the selectmen to divide the town into school districts. This law was soon amended (1800), by empowering the district to levy a tax for building a schoolhouse; was again amended (1817), by making the district a corporation, with power to sue and be sued, etc.; was further amended (1827), by requiring towns having districts to choose for each district a "prudential committee man," who should have the care of school property and the power to appoint teachers. The law allowed these committee men to be elected by vote of the electors in special district elections, or to be appointed in the general town meeting. Most of the districts preferred to elect their own committee man, who held office for the "term of one year." Thus the school district became a political unit, subject only to the general state law. The amendments of 1827 provided that the district schools should be maintained by a compulsory town tax. Notwithstanding some defects, this law contained several foundation principles, which were subsequently adopted by the other New England states, by New York, and by the Western states. In Massachusetts it was disastrous to many of the original town "Latin grammar schools," but, on the other hand, it led to the foundation of academies. If these new insti-

tutions fitted fewer boys for college, they recognized the higher education of girls, and took a strong hold on the common people. The academies, when their usefulness came to an end, were superseded by high schools for both girls and boys, with a classical course for some pupils and an English course for those who desired it. In fact, the experiments of the people under this law were only incidents in the great wave of American spirit that swept over the whole country. There had prevailed a strong tendency to local self-government, as opposed to centralized power. On this point William T. Harris remarks: "The central power had been largely theocratic, or ecclesiastical, at the beginning. The reaction against ecclesiastical control went too far in the direction of individualism. The farthest swing of the pendulum in this direction was reached in 1828, when the districts obtained exclusive control of the schools in all matters except the examination of teachers."

In 1795 New York provided for the election of three district school trustees, having power to appoint teachers, build schoolhouses, etc. California, in 1851, made a similar provision, which is still suited to existing conditions. In variously modified forms like provisions are now found in most of the states of the West and the Pacific Coast.

Town or County.—In New England the town, from the beginning, was the unit of local civil government, the county being used for judicial purposes only. In the Southern states the county was the unit of government, the town being only an election district and the jurisdiction of a justice of the peace. These reversed conditions, though in modified forms, still exist at the present time. In New York, Pennsylvania, and the Western states there is a compromise of these two extremes. In a thickly

settled manufacturing state, cities, villages, and towns are multiplied, and town government becomes relatively strong. In sparsely settled agricultural states, the county government dominates that of the town. It is evident that the school system must of necessity be developed along the lines of the civil government. The law of 1789 in its amended forms served its purpose in Massachusetts for half a century, but as population became dense, as cities and villages sprang up, the tendency grew strong to revert to the original town schools under control of town government. The other New England states at various later periods followed the lead of Massachusetts.

But under different civil conditions—in the Middle, the Western, and the Pacific states, the district schools with local school trustees grew strong, and they still flourish with undiminished vigor. In twenty states district school trustees are elected by direct vote of the electors in district elections.¹ But they are now under the supervision of county superintendents, or county boards of education, and are governed by specific provisions of state law. In most of these states a heavy state property tax is levied for the support, in part, of common schools.

Schools in Boston.—Turning again to schools in Boston we find that as late as 1818 it was a law of the Commonwealth of Massachusetts that “No youth shall be sent to the grammar schools unless they shall have learned in some other school, or in some other way, to read the English language, by spelling the same.”

“The laws likewise provided,” says Wightman in his “Annals of the Primary Schools of Boston,” “for the establishment of preparatory schools where grammar was not taught; but to this time (1818) there

¹ See “The Social Unit in the Public School System of the United States.” Report of the Commissioner of Education, Vol. 2, 1895-96.

were no public schools in Boston where children could be qualified for admission to the 'Grammar Schools.' The age at which they were eligible was fixed at seven years, and but few were ever admitted under that age. It was consequently necessary for parents to send their children to *private* schools."

Boston in the year 1810 was a city of 33,250 inhabitants. "There are seven public schools, viz.: one Latin grammar school, three English grammar schools, and three for writing and arithmetic, supported wholly at the expense of the town."¹

It was in 1818, one hundred and eighty-eight years after the settlement of Boston, and four years before Boston became an incorporated city, that the selectmen of the town appointed, in answer to a petition from the people, a Primary School Committee to establish and control primary schools for children under seven years of age. Such schools were soon opened and made free to both boys and girls between four and seven years of age. "At a legal meeting of the inhabitants of the town of Boston, held at Faneuil Hall, on Monday, the 31st day of May, A.D. 1819, the following report was read, accepted, and ordered to be printed and distributed for the information of the inhabitants. Attest, Thomas Clark, Town Clerk." So reads the town record. This report of the committee shows that they had established twenty schools and admitted to them over 1100 children. The report further shows that women were appointed as teachers, and that in most of the schools the girls were taught knitting or sewing as well as reading. The town of Boston at this time had about 40,000 inhabitants. But however slow in providing for free primary schools, Boston finally took the lead in maintaining free high schools; in supporting modern graded

¹ Morse's Geography, Boston, 1812.

grammar schools and primary schools; and in building substantial and well planned schoolhouses. In 1851 Nathan Bishop became the first city superintendent of schools. He was succeeded by John D. Philbrick, who held the office for eighteen years, and by his wise administration brought the Boston schools to a high degree of excellence.

Parish Schools.—Connecticut was the only New England state that made the unfortunate experiment of surrendering, in part, the control of public schools into the hands of "school societies." This experiment began in 1712 by making the church parish a school district, and by putting into the hands of "school societies" the local management of schools, and school moneys. These "societies" were not strictly sectarian, but they had strong church affiliations. When the state had secured a school fund of one million of dollars derived from the sale of state lands in the Western Reserve, the income of this fund became a matter of importance to the school "societies." Under the statute of 1794, the parish society schools received their *pro rata* of the state school moneys in common with town and district schools, but for the sole use of the schools, the parishes being compelled to make special application to the legislature for the use of any of the money for church purposes. This parish society scheme lingered along until the middle of the century, when it died out. But meanwhile, the common schools of this state had fallen below the standard maintained in other New England states.

COMMON SCHOOLS IN NEW YORK.

It was not until after the adoption of the Constitution that the state of New York took up in earnest the organ-

ization of common schools under state control. In 1795 Governor George Clinton urged the establishment of common schools throughout the state, and an act was passed by the state legislature "for the purpose of encouraging and maintaining schools in the several cities and towns in the state, in which the children of the inhabitants of the state shall be instructed in the English language, or be taught English grammar, arithmetic, mathematics, and such other branches of knowledge as are most useful and necessary to complete a good English education." Under this law each town was to elect three or more school commissioners, empowered to license teachers and apportion public moneys. The people in each school district elected local school trustees empowered to employ teachers and provide for schools. This act also levied a state tax for the support of schools, to be continued for five years. This beginning was supplemented by the act of 1812, which required that every town should be divided into school districts; that each town should elect from one to six inspectors, who with the commissioners were to examine teachers and supervise the schools. The law also created the office of state superintendent of schools; and Gideon Hawley, born in Connecticut, but a graduate of Union College, N. Y., was the first man appointed to fill the place. George Clinton, of Scotch-Irish stock, held the office of governor of New York for seven successive terms of three years each, and during the whole period of twenty-one years was untiring in his efforts for common schools. The law of 1812 annually appropriated \$50,000 to be distributed *pro rata* among the counties of the state, and authorized the levy of a county tax equal to the state apportionment.

County superintendents were appointed under the law

of 1841. A succession of able governors and secretaries of state carried on the good work. The state school laws became models for the new states of the Northwest. But in New York city, which was excepted from some of the vital provisions of the state law, the schools under the control of "The Public School Society" remained in a condition of arrested development for many years.

One of the most remarkable educators in New York during the formative period of common schools was Dr. Eliphalet Nott, who became president of Union College in 1804. Under his wise management a feeble denominational college became in a few years "an American unsectarian Christian University." There went out from this institution a long array of educators and public men. "It is doubtful," says Dr. Mayo, "if any American college ever sent forth a larger number of influential men in public and professional life than Union during the sixty-two years' presidency of Dr. Nott. In Governor William H. Seward and in John C. Spencer, Secretary of State and Superintendent of Schools, he gave to New York the most important agents in the organization of the common-school system of the commonwealth."

New York City.—The schools of New York city had a slow and complex evolution. At the time of surrender to the English (1664) there were in the town of New Amsterdam three public schools, a "Latin grammar school," and ten or twelve private schools. The Dutch schools were finally fused with English, but up to the close of the Revolutionary War public schools made little progress, while parish and private schools grew strong. In 1813 a special state law for New York city directed the payment of state school moneys to "the trustees of the Free School Society and such incorporated religious so-

cieties as now support, or shall hereafter establish, charity schools within the said city." "The Society for Establishing Free Schools in the City of New York for the education of such poor children as do not belong to or are not provided for by any Religious Society" had been chartered in 1805, and De Witt Clinton was elected as its first president. It established (1806-15) three large schools on the "Lancastrian System," an experiment imported from England. In 1826 it was rechartered under the abbreviated title of "The Public School Society," under which name it gradually gained practical control of the city public schools. It received tuition fees, public funds, and private contributions for the support of its schools. This "society," though not strictly sectarian, had strong Protestant ecclesiastical affiliations, and this fact led to a demand that the Catholic parochial schools should share a *pro rata* division of the school funds. After much controversy, the state legislature decided against such division of the school fund, and passed the law of 1842, by which the public schools of New York city were placed under the direct control of the civil government. This law provided for the election of a New York city board of education; and for local ward school trustees, and the establishment of schools directly under the control of the civil government. In 1853 the "society schools," which still maintained a lingering existence, were finally and effectually fused into modern public schools by state enactment. But the system included only primary and grammar schools, with the exception of one free academy for boys. This famous free academy, established in 1849, was chartered in 1866 under the name of "College of the City of New York." It is a part of the public school system of the city, and is supported entirely by taxation.

Tuition, books, and stationery are free. It stands as the first fully organized free public college in the United States, under municipal government and support. It has a strong pedagogical department. Its counterpart is found in the "New York Female College" (1870), which is a high-grade normal school for young women. In 1867 rate bills for the partial support of rural common schools were abolished and the state property tax was raised to one mill and a quarter on a dollar.

New Jersey.—This colony was settled by Swedes, English Presbyterians, Congregationalists, and Quakers, who brought with them preachers and teachers and established churches and schools side by side. As early as 1676 public schools maintained by subscription began to be organized. In 1693 there appears on the statute book an act which authorizes, by local option, the people of any town, "by the consent and agreement of the major part of the inhabitants," to employ a teacher and collect tuition. The College of New Jersey (now Princeton) had its beginning in 1747. In 1816 a state school fund was established, and in 1820 there was enacted the first general law authorizing the township to raise money for the support of schools. In the general development of a common-school system this state followed the lead of New York, and Delaware that of Pennsylvania.

PROGRESS IN PENNSYLVANIA.

The revised state constitution (1790) contained a section which reads as follows: "The legislature shall, as soon as conveniently may be, provide by law for the establishment of schools throughout the state in such manner that the poor may be taught gratis. The arts and

sciences shall be promoted, in one or more seminaries of learning." It was not convenient for the legislature to carry this section into effect until twelve years later (1802), when a law was enacted entitled: "An act to provide for the education of the poor gratis." This law provided that parents too poor to pay tuition fees, could send them to school at public expense, on application to the proper authorities. Slightly amended in 1809, it remained in force for more than a quarter of a century. But the "pauper act" was unpopular. People disliked to declare their poverty, and children were unwilling to be called "charity scholars." Meanwhile, denominational academies and seminaries were aided by appropriations of public moneys. All these subsidized institutions were arrayed in open hostility to a system of American common schools.

"For forty years after the organization of the state government, there were no laws enacted for the creation of a public-school system.¹ Nearly all the educational legislation was in favor of academies and seminaries. During this period many acts were passed favorable to these institutions, and nearly \$300,000 were spent in their aid. In 1833 there were two universities, eight colleges, and fifty academies, all of which had been liberally aided by the state."

It was not until 1834 that the state of Pennsylvania secured an effective school law. The conservatives and sectarians made desperate attempts to repeal this act at the next session of the legislature (1835), and the repeal was defeated only by the heroic efforts of Thaddeus Stevens, then a member of the legislature. Thaddeus Stevens, born to poverty in Vermont, began his education

¹ See "Bulletin of Information" No. 9, 1890, by Dr. Frank W. Blackmar.

in a country school, continued it in a country academy, worked his way through Dartmouth College, emigrated to Pennsylvania, succeeded in business, and represented his adopted state in the senate of the United States.

The "Agricultural College of Pennsylvania" became fully established in 1862. It had its beginning in the "Farmer's High School" (1854) and changed its name when the state came to its aid to the extent of \$100,000. The land grants of 1862 came to its aid, and its name was changed to "Pennsylvania State College."

Philadelphia Schools.—The city of Philadelphia was slow in providing schools for the children of the common people. Private schools and society schools long stood in the way of free public schools. In 1812 the common council was authorized by state law to establish common schools, but nothing was done until five years later, when the "Society for the Promotion of Public Economy" was organized. Public schools modeled after the Lancastrian (monitorial) system of England were finally established. These schools for the poor were cheap, but not good. At this time the embargo and the war with England (1812-15) had crippled the commerce of Philadelphia, New York, Boston, and all the other seaport towns, and thousands of their inhabitants had been reduced to poverty. When "hard times" came on, the prisons of all these cities were crowded with thousands of debtors. The semi-barbarous English laws of imprisonment for debt were established during colonial times, and were kept on the statute books of all the states long after this period.

"By an old law which went back to the days when Pennsylvania was a colony," says McMaster,¹ "magistrates were allowed cognizance,

¹ McMaster's "History of the People of the United States." Vol. IV.

without appeal, of debts under forty shillings or five dollars and thirty-three cents in amount. When the indebtedness exceeded that paltry sum the debtor was allowed a stay of proceedings. But no such happiness awaited the poor wretches who owed a sixpence or a shilling, and who each year were dragged to prison by thousands, on what were truly called "spite actions." Murderers and thieves, forgers and counterfeiters, were fed, clothed, and cared for at the expense of the state; but for the unhappy man whose sole offence was his inability to pay a trifling debt of a few cents, no such provision was made. The food he ate, the sheets that covered him, the medicine he took—nay, the very rags he wrapped about his sores—were provided, if provided at all, by his friends, by the public, or by some Humane Society or Society for Alleviating the Miseries of Public Prisons."

In 1794, this law was amended by ordering that the prison inspector should provide fuel and blankets for the poorest prisoners, make an allowance of seven cents a day for food and charge it to the creditor, but the main part of the statute remained in force.

Things were no better in the city of New York. In 1817 there were 1984 debtors confined during the year; and of these 729 were imprisoned for debts less than \$25. During the period of hard times one in every seven of the inhabitants in this city was wholly or in part supported by charity. In Boston the condition was quite as bad. During the fifteen months from January 1, 1820, to April 1, 1822, 3492 men and women were imprisoned for debt, of which number 2000 were thrown into jail for sums less than \$20. One debtor had been in prison for thirty years. Another froze to death in the jail at Cambridge. In each of these three great cities of this country, the jails and penitentiaries were exceeded in wretchedness and filth only by the debtor prisons in London, so realistically pictured by Charles Dickens.

But such awful conditions could not long continue. One by one, Pennsylvania, New Hampshire, Vermont, and Massachusetts, in the period from 1817 to 1825, prohibited

imprisonment for small debts in sums varying from thirteen to twenty-five dollars. After this time, the constitutions of the new states of the West prohibited imprisonment for small debts,—an evidence of a great advance in civilization.

During the period of demoralization, the cities were full of dramshops, and drunkenness was a prevailing vice. Lotteries were universal. They were authorized by state law, and even started in aid of colleges, churches, schools, and many other purposes. But at length the tide of reform set in. The bloody criminal code of England which had been fastened on the colonies was ameliorated, and the number of crimes punishable with death was reduced from fifteen and thirty to two or three. The bands of idle boys prowling in the streets for evil, were gradually gathered into public schools. This episode in the history of the civil and social conditions of that period shows why common schools made but little headway in the great cities, and why state legislation was so long delayed.

The city of Philadelphia finally established common schools, which educated the children of the common people without distinction of class, caste, or charity, but the evolution was slow. The city remained without a superintendent of public schools until 1883, when the office was created and James McAllister was appointed to reorganize and modernize the city school system. He did the work well.

One of the most notable educational bequests ever made in this country was the foundation of Girard College, with an endowment of several millions of dollars, by Stephen Girard. It was established as a home for orphan boys where they should be trained and educated for the

practical pursuits of life. The course of instruction adopted for Girard College was the first practical and potential protest against the conventional educational formalism of those days.

EDUCATION IN THE SOUTHERN STATES.

Virginia.—We have seen that, during the colonial period, education was provided for in Virginia after the manner in England, by means of parish schools, private schools, academies, and the endowed College of William and Mary. Though Jefferson failed in his plans to provide schools for the education of the common people, he succeeded, after a quarter of a century of untiring efforts, in organizing the University of Virginia, which was opened in 1825, one year before the death of its illustrious founder. The distinguishing features of this institution were worthy of the great statesman who planned them. The University provided for elective courses of study; the honor system of discipline; the voluntary system of religion; and the prohibition of merely honorary titles.

The state school law of 1820, however, provided that the county could be divided into school districts of six miles square. If the people of the district raised three fifths of the sum required to build a schoolhouse, the remaining two fifths might be appropriated from the state "literary fund." But the small income,—\$45,000 a year from the interest of the state school fund,—could do but little in establishing a public-school system. In the western part of this state the Scotch-Irish Presbyterians—those "Puritans of the South"—supported their church schools with their accustomed zeal. From these people sprang the Breckenridges, the McDowells, the Pickenses, and

many other prominent families in the South. Emigrants of this sturdy stock poured into Kentucky and Tennessee in early days, and became prominent in fighting the Indians and in establishing schools.

A century after the rejection of Jefferson's plans for public schools,—at the close of a war greater than that of the Revolution,—Virginia fell into line and established a system of American free public schools.

Most of the other Southern states followed the lead of Virginia. Efforts were made (1810-30), to secure State School Funds, the interest of which should be applied to said rural public schools and subsidize county academies. Several states attempted to establish schools for educating "the children of the poor." Maryland subsidized from a scanty school fund a small number of county academies of the classical type. The city of Baltimore experimented with a Lancastrian school in 1820; made in 1830 a beginning of public schools; and in 1839 opened a high school.

South Carolina. — South Carolina, in 1801, established the College of South Carolina, appropriated \$50,000 for buildings, and \$6000 annually for its support. The academies and private schools in Charleston were good, but, prior to 1730, there were no grammar schools in the state, and in 1776 there were only five. The Huguenots and Scotch-Irish that settled there were active in support of education, and both races stamped their impress on the educational, social, and political institutions of the state and the nation. The first public school movement in this state was made by an act of the legislature (1811), which created a free-school fund with the proviso "that the use of this fund should be confined to educating the children of the poor in case it was not adequate for all." The few

schools that were established under this act were made unpopular by the charity proviso. "The annual appropriation by the state, which, for a period of forty years, averaged \$37,000 a year," says Dr. Mayo, "was of itself a pittance for the education of at least 50,000 children and youth in need of elementary schooling." In 1868 the new constitution provided for a uniform system of public schools supported by taxation.

Georgia. — Georgia, the latest settled of the thirteen original states (1732), had a comparatively slow growth both in population and schools. The English settlers were reinforced by large numbers of Scotch-Irish Presbyterians, and the usual number of Episcopal and Presbyterian parish schools and denominational academies were opened, as in other Southern states. In 1784 the University of Georgia was endowed by a state grant of 40,000 acres of wild lands, worth perhaps a thousand dollars; and a land grant of 1000 acres was offered to each county to aid in opening an academy. Most of the income from a small state school fund was used in subsidizing academies, seminaries, and other private institutions, leaving but a pittance to the elementary schools for teaching "indigent children" to read and write. Richard Malcolm Johnson has written a graphic history of early schools in middle Georgia, which is well worth reading by the historical student.¹

North Carolina. — North Carolina secured a state school fund (1825-40) of two millions of dollars, and then distributed the annual income in aid of county district schools, thus making a nearer approach to common schools than any other Southern state. This state was strong in small private incorporated academies. During the

¹ See Report of the Commissioner of Education, 1894-95, Vol. 2.

period from 1760 to 1825, more than 150 of these academies were incorporated. Into the middle and western parts of this state and the Piedmont region there was a steady stream of Scotch-Irish settlers, and of Germans and Quakers from Pennsylvania. These Scotch-Irish Presbyterians, Moravians, Lutherans, and Friends set up their churches and church schools and maintained both with great zeal. The University of North Carolina was chartered in 1789 and opened in 1795. It is well to remember that the Scotch-Irish settlement of Mecklenburg, in a public meeting on the 20th of May, 1775, made the first public declaration, in the form of resolutions, that the Americans were "a free and independent people." In 1840 this state had 141 academies and grammar schools and 632 primary and common schools. In 1860 the number of primary schools had increased to 4000, with an attendance of 160,000 pupils.

"This state is also conspicuous," says Commissioner Harris, "for the advanced position it occupied in matters of education in the constitution adopted in 1776, in the early chartering and opening of its State University, in the breadth of the educational thought shown by Archibald D. Murphey, the father of her common schools, and in the administration of Rev. Calvin H. Wiley, her first general superintendent. This state, too, was alone among the Confederate states, in keeping her schools open during the war."

Rural Schools of the South. — Even the primitive "old field," or neighborhood, rural schools of North Carolina, Virginia, and other Southern states deserve to be held in grateful remembrance, along with incorporated academies and endowed colleges. These schools, like those of New England in early days, enabled many boys, born to pov-

erty, but gifted with power, to make a start in life and fight their way in the world.

It was in one of these schools in North Carolina that a sandy-haired lad of Scotch-Irish descent, named Andrew Jackson, learned "to read and write and cast accounts," otherwise he would never have been heard of among men. Though born to poverty, he was richly endowed by heredity with the qualities that command leadership. His real education was mainly acquired by the study and practice of law. In the state of Tennessee, to which he emigrated, he rose to leadership in political and military affairs. In the War of 1812 he was the one man in the nation best fitted to take command of the western frontiersmen, and to beat back the British army of trained veterans at New Orleans. His election as President of the United States marked the growing political power of the West, and the birth of an American spirit of democracy as a reaction against the federalism of New England and the British conservatism of Virginia. This awakening of the common people gave a fresh impetus to common schools in Kentucky, Tennessee, and Ohio, and other states soon to be formed out of the Northwest Territory.

John C. Calhoun, of Scotch-Irish descent, born in South Carolina, educated at Yale, and bred under the influence of the old regime of his native state, lived to become the great political leader of the old South. His career, compared with that of Andrew Jackson, affords a striking illustration of the effect of different environments.

A generation later, James K. Polk, born in North Carolina, of Presbyterian Scotch-Irish stock, studied law, emigrated to Tennessee, rose to leadership, and became President of the United States. Here, also, was born Thomas

H. Benton. He too emigrated to Tennessee, studied law, served under General Jackson at New Orleans, removed to St. Louis, and represented Missouri for thirty years in the senate of the United States.

Henry Clay, of English stock, born to poverty in Virginia, obtained a limited school education in Peter Deacon's log-cabin schoolhouse, which had no floor but the earth and no window but the door. He earned his living at an early age as clerk in a law office, studied law, and emigrated to Kentucky. Gifted by nature with a winning manner and great power of oratory, he became a political leader in the senate of the United States.

From this state, also, came William Henry Harrison, of notable English descent. Educated in Hampden-Sidney College, he entered the army as an ensign, and was ordered to the West, where he combined a military with a civil career. He was appointed as the first secretary of the Northwest Territory, then territorial delegate to Congress, next, governor of Indiana Territory, and was finally elected President of the United States.

Abraham Lincoln, whose ancestors dwelt in Virginia, was born to the hardships and poverty of pioneer life in Kentucky. His school education was limited to reading, writing, and arithmetic, which he learned during a few months' attendance in the primitive schools of that period. He emigrated to Illinois, earned his living by farm work and other occupations, educated himself by the study and practice of law, and became one of the greatest of American presidents.

The lives of this group of leaders among men make an interesting study on the comparative effects of heredity, school education, and environment. Washington, Jefferson, John Marshall, Patrick Henry, John Tyler, and

Andrew Johnson make another group worth special consideration as a psychological study.

Besides these few notable men, there went out from these states into the wilderness of Kentucky, Tennessee, and the Northwest Territory, thousands of hardy pioneers of the type of Daniel Boone, John Sevier, and George Rogers Clark. They went there in search of new homes on fertile lands, and because there was little chance for them to make their way in the older settlements. These constituted the advance guard of civilization. They fought the Indians, subdued the wilderness, and helped to lay the foundation of civil government and common schools in the states of the West. Though most of them had but scanty schooling, and some of them none at all, they made a success of life under new conditions.

THE AGE OF ACADEMIES.

The half century after the adoption of the Constitution was marked by great financial, commercial, and industrial prosperity, broken only by the war of 1812-15, and the financial panic of 1837. It was during this period that academies and seminaries were established to supplement the elementary instruction of the common schools. These academies were established in great numbers in all parts of the United States. In Massachusetts alone they numbered nearly one hundred, and they were numerous and strong in New York, Pennsylvania, and North Carolina. A few of these endowed institutions, like the Phillips-Exeter Academy (1781), in New Hampshire, and the Phillips-Andover Academy (1780), in Massachusetts, were preparatory schools exclusively designed to fit boys for college; but, in general, they provided a course of study

preparatory for college, and also a general educational course, largely elective. These academies were mainly supported by tuition fees, though often aided by state subsidies or individual bequests. They were governed by boards of trustees, were generally denominational in name, but liberal in management. They were, in fact, *quasi* public schools, as whatever endowments or state aid they received, reduced their rates of tuition. They were no longer modeled after English schools; they were, like the common schools, American institutions. They were open, at least in New England, to both young men and young women, forerunners of the co-education of the sexes in modern high schools and state universities. They supplied teachers for the rural common schools. They trained, for two generations, the leaders in business. They recognized the higher education of women. After flourishing for more than half a century, they were gradually superseded, except in rural districts, by city and town high schools.

Endowed Academies. — The first endowed academy in Massachusetts was the Dummer Academy at Byfield (1763.) Leicester Academy was incorporated (1784); Berwick (1791); Westfield (1793); Bradford (1803); Hampton, N. H. (1810). The first academy in New Hampshire for girls exclusively, was the endowed Adams Academy in the Scotch-Irish town of Londonderry, or Derry (1823); the first for girls in Massachusetts was at Ipswich (1823). The Troy Seminary (N. Y.) for young women, was opened in 1821, by Mrs. Emma Hart Willard. Mt. Holyoke Seminary for the education of young women was founded by Mary Lyon, at South Hadley, Mass., in 1836.

Concerning the influence of academies in Massachusetts, George H. Martin in his *Evolution of the Massachusetts Public School System* says: "Besides this work as fitting schools, the academies had an immeasurable influence in broadening non-college students. They reached an immense multitude of young people. Leicester had received from six to eight thousand pupils, of whom perhaps four

hundred had been fitted for college: Westfield had over eight thousand persons; Lawrence, at Groton, nearly eight thousand; New Salem not less than seven thousand. In eighty or ninety years—three generations—these four schools alone had brought into a scholarly atmosphere, had kept under the instruction of scholarly men and women, for a longer or shorter time, not less than thirty thousand young men and young women—ten thousand to a generation; and these are only four of more than a hundred such schools."

District Schools.—The district schools and rural academies were adapted to the social and industrial conditions of the period in which they flourished. They turned out good American citizens. They brought the children of all classes together on one common footing. The strict discipline of the school was backed up by a firm home training. The value of an education was a common topic in every family. Parents saw to it that their children studied at home during the long winter evenings. The forehanded farmers sent all their children, boys and girls alike, to the district school; they sent them, also, for a few terms to the academy; they toiled and economized to send at least one son to college.

HOME EDUCATION.

In addition to the supplementary education furnished by the academy we must take into account the value of a correlative course of manual training in farm work and domestic industries, which by industrial conditions was rigidly enforced on the great majority of the children during the period under consideration. Agriculture was the leading occupation of the people. For half the year at least the boys were kept at home hard at work in plowing, planting, hoeing, haying, harvesting, and taking care of live stock. The girls took a manual training course in

cooking, washing, mending, knitting, and sewing. Before the era of cotton factories and woolen mills, every farmhouse contained a loom and a spinning wheel. The girls assisted their mothers in carding and spinning wool, in weaving it into cloth, and in making up clothing for the family. Thus both boys and girls were trained into steady habits of work. If they lacked somewhat in book knowledge, the loss was made up to them by a training in the practical duties of life. If this strict and sometimes over-exacting school and home training failed to develop the æsthetic side of human nature, it resulted in a stock of vital common sense as a guide in earning a living.

"That our successful men have come so largely from the country," says Dr. John Dewey, "is an indication of the educational value bound up with participation in this practical life. It was not only an adequate substitute for what we now term manual training, in the development of hand and eye, in the acquisition of skill and deftness; but it was initiation into self-reliance, independence of judgment and action, and was the best stimulus to habits of regular and continuous work." Back of the common school and behind the home education, there lay, also, the strength of heredity transmitted from ancestors who loved liberty and prized learning. All these things were further supplemented by the strong social influences of the church, the town meeting, and the free discussion of public affairs.

PRACTICAL VALUE OF THE COMMON SCHOOL.

Horace Greeley was graduated from a district school into a printing office in the Scotch-Irish town of Londonderry in New Hampshire. From a neighboring school district Colonel John Stark went out to the battle of Bunker Hill, followed, according to tradition, by all the able-bodied men in town, save only two. Later in the

war the same townsmen followed General John Stark to the battle of Bennington. Generals John Sullivan, John Reid, and Alexander Scammell belonged to the same fighting stock and were trained in similar schools in neighboring towns.

Benjamin Franklin when seven years old entered a Boston public school, left it at ten years of age, and began his great career as printer, statesman, and philosopher. George Peabody at eleven years of age left a Massachusetts common school to become, first a clerk in a small store, next a merchant, and finally the educational philanthropist who created the Peabody Southern Educational Fund which has done so much to aid the establishment of common schools in the South.

In the common school and rural academy of this same state Mary Lyon fitted herself for her great work in founding Mt. Holyoke Seminary and College for young women. Clara Barton, whose great work in the Red Cross Society is known to all the world, was educated in similar schools.

In common school, academy, and Dartmouth College, Daniel Webster was trained. His father mortgaged the home farm to send Daniel to college, and his mother made for him with her own hands a homespun suit as an outfit.

In an obscure common school in Massachusetts, Roger Sherman got all the school education of his life. By successive stages, he rose from the shoemaker's bench to become, first a county surveyor, next a lawyer, then judge of the Superior Court; afterwards a member of the Continental Congress, and member of the committee of five to draft the Declaration of Independence.

But the greatest strength of the common schools con-

sisted in their power in molding the common people into intelligent and industrious citizens, many of whom, for successive generations, pushed out into the West and aided in the extension of free schools and free labor.

The real power of this Republic consists, not in a few great statesmen, orators, or political leaders, not in a few highly educated philosophers or scientists, not in a few millionaires, but in the consolidated character, intelligence, and public opinion of the masses who cast the ballot on election days, who shoulder the musket and man the battleships in times of war; of the men who in time of peace carry on the industrial pursuits of the nation; of the women who protect the homes and educate the children,—and if these lack the wisdom of intelligence the republic will suffer harm in spite of the educated few. Neither does the wealth of this nation consist alone in real estate, agricultural products, manufactures, and mines; for all these material things only furnish the means for higher ends and a more complete civilization. The world has been enriched largely by the creative power of inventive genius; and the great inventions—the steam-engine, the steamship, the railway, the cotton-gin, the spinning-jenny, the electric telegraph, the countless labor-saving machines in every department of industry—none of them were the blundering products of unskilled men held in the bonds of ignorance. Even the elective franchise is a menace to the republic unless the great majority of voters know how to think intelligently and act wisely in political affairs. The right of trial by jury—what is it but a shadow of justice when the jury box can be filled by the “born thralls” of illiteracy?

THE PERIOD OF EDUCATIONAL REFORM.

The decade of 1830-40 marks the beginning of a great educational awakening in the United States. In consequence of the rapid development of manufactures, commerce, and means of transportation, there had begun a tendency of the population to concentrate in cities and villages. The urban population, which, in 1790, constituted only one in thirty, had increased in 1830 to one in twelve. Changes in social and industrial conditions led to corresponding modifications of school laws and school organization. The "age of homespun," the "old-fashioned district school," and the denominational academy began to fall into decadence together.

It was at this period (1837) that Horace Mann appeared in Massachusetts as Secretary of the State Board of Education. "He was," says William T. Harris, "like so many of the great men of the Puritans, modeled on the type of the Hebrew prophets." He went out into all parts of the state as an educational missionary, lecturing to the people wherever he could gather them together, in hall, or meeting-house, or country schoolhouse, on the need of reforms in schools and school management. He advocated the consolidation of the independent school districts into township schools under the control of one central school committee; the levy of town taxes for school purposes; the establishment of graded schools, normal schools, and high schools; a higher standard for teachers' certificates; the addition of oral teaching to text-book memorizing; institutions for the deaf and dumb and blind; special schools for the reformation of vicious children; and he attacked the extreme severity of corporal punishment in the Boston schools. He wrote school reports so eloquent that they are still read as classic educa-

tional literature. His fiery zeal roused the people to action. Henry Barnard took up the same work in Connecticut, and the two greatest of early American educational leaders together inaugurated a reform movement felt even in the remote states of the South and West. "The school children of Massachusetts," says George H. Martin, "made no mistake when they placed in front of the capitol of the state a statue of Horace Mann, as of their benefactor and their ideal."

The establishment of normal schools in Massachusetts and New York led to marked improvements, both in methods of teaching and in courses of study. New and improved text-books appeared; city schools were graded; and high schools began to be organized. School laws were amended. City, town, and county superintendents were appointed and school supervision was begun in earnest. Since that period of educational revival, there has been no reaction in the spirit of progress.

THE GREAT NATIONAL CRISIS.

We are apt to consider accomplished results rather than the remote causes which lead up to them. Seventy years after the adoption of the Constitution there came the great crisis in national affairs in which the stability of the Republic was at stake. It was then that the beneficent results flowing from the ordinance of 1787 were clearly made evident. The powerful and populous states, carved out of the Northwest Territory, which had been dedicated by law to freedom, gave to the nation that wisest of modern statesmen, Abraham Lincoln. The President's call to arms was answered by hosts of volunteers, made intelligent and patriotic citizens in the common schools, which had been fostered by the Magna Charta of 1787.

In these public schools were trained, in their boyhood, the great military and civil leaders,—Grant, Sherman, Harrison, Hayes, Garfield, and McKinley—better known but not more patriotic than the rank and file of the army. Shoulder to shoulder, with the common-school recruits from the older Eastern and Middle states, and the newer states of the Pacific, they fought through the war or fell on the field of battle, in defense of the Union.

The spirit of these patriots is clearly set forth in General Grant's address to his comrades, at Des Moines (1875), which reads, in part, as follows: "In this centennial year of our national existence, I believe it is a good time to begin the work of strengthening the foundation of the house commenced by our patriotic forefathers, one hundred years ago, at Concord and Lexington. Let us all labor to add all needful guarantees for the more perfect security of free thought, free speech, a free press, pure morals, unfettered religious sentiment, and of equal rights and privileges to all men, irrespective of nationality, color, or religion. Encourage free schools, and resolve that not one dollar of money appropriated to their support, no matter how raised, shall be appropriated to the support of any sectarian school. Resolved that either the state or nation, or both combined, shall support institutions of learning sufficient to afford to every child growing up in the land the opportunity of a good common-school education, unmixed with sectarian, pagan, or atheistical tenets. Leave the matter of religion to the family circle, the church, and the private school supported entirely by private contribution. Keep the Church and State forever separate. With these safeguards I believe the battles which created us 'the Army of the Tennessee' will not have been fought in vain."

CHAPTER III

SECONDARY AND HIGHER PUBLIC EDUCATION

THE BEGINNINGS OF HIGH SCHOOLS

Public High Schools.—We have seen that for more than a century the academy, the seminary, the private school, and the Latin grammar school furnished the means of secondary education as a supplement to the elementary common school, or as a preparation for college. It was not until nearly the middle of the nineteenth century that public high schools and public normal schools began to form an essential feature in public education.

The modern free high school is a modified type of the academy and seminary of former times with traces of the early Latin grammar schools. Its distinctive points of difference from the older institutions are that it is under public management instead of denominational or private control, and is free from tuition fees. It came into existence to meet the demands of modern life. It was not the work of the college or the university reaching downward; nor was it the creation of speculative philosophers. It came naturally from the upward pressure of the common schools, and the demand of the masses of the American people for a free education of a grade higher than that of the common school. One of the functions of the high school is to fit pupils for the college or university; but its chief purpose is to give the great mass of pupils, after

they have completed the grammar school course, the means of acquiring an English education which shall better fit them for good citizenship and for the ordinary pursuits of life.

Leaving out of consideration the colonial Latin schools, and other "grammar schools" of like type, the modern free high school may be said to date, in this country, from the establishment of the Boston English High School (1821), with George B. Emerson as head master, and a course of study which included, besides English, the French and Spanish languages, physics, mathematics, mental and moral philosophy, rhetoric, and general history.

Massachusetts in 1826 made the modern high school a part of the state school system by enacting a law that towns having at least 500 families should organize an English high school, and that towns having at least 4000 inhabitants should establish a classical high school. In 1840 this law was repealed, but was re-enacted in 1848. For some time the high school had to encounter the determined opposition of private preparatory schools, denominational academies and seminaries, denominational colleges, and many tax-payers. It took all the fiery zeal of Horace Mann and his co-workers to break down these antagonizing influences and finally to win a victory for the American people.

The dates of the establishment of free modern high schools in the great cities afford a striking illustration of the slow evolution of this part of the American school system:— Boston (1821), English high school for boys, and (1825 and 1852) one¹ for girls; Philadelphia (1837), boys' high school, and (1840), a girls' high school; Buffalo

¹ Continued only one year and abolished because it was considered too expensive.

high school (1838); Baltimore (1839), boys' high school; Providence (1843); Cincinnati (1847), Central high school; New York city (1849), free academy for boys; Cleveland high school (1852); St. Louis (1853), high school for boys and girls; Newark high school (1855); San Francisco (1856), English high school for boys and girls; Chicago high school (1856); Detroit high school (1858); New York city (1870,) normal school for girls, and (1897) three modern high schools.

In 1838 there were fourteen high schools in Massachusetts; in 1852, sixty-four; in 1860, one hundred and two. But during the last half century, under the imperative demands of the people, the high school has been extended not only into every city, but also into towns, villages, and rural districts, so that in 1897 no state or territory was without one, except Alaska.

According to the Report of the Commissioner of Education (1896-97), there were 5109 public high schools in the United States, of which, in part, Ohio had 576; Indiana, 343; New York, 341; Illinois, 323; Iowa, 322; Michigan, 280; Pennsylvania, 249; Massachusetts, 223; and other states in varying numbers from 218 in Nebraska to 2 each in Utah and Wyoming, 3 in the Territory of Oklahoma, and 3 each in Indian Territory and Arizona.

In these public high schools there were enrolled 235,988 girls and 173,445 boys, making a total of 409,433 students. Of this number the returns for 1897 show that only 12.17 per cent. were preparing for college.

In the total enrollment the state of New York reported 38,957 students; Ohio, 37,958; Illinois, 31,909; Massachusetts, 31,360; Michigan, 25,745; Iowa, 24,626; and Pennsylvania, 24,044. There were 627 high schools in cities having a population of 8000 or upwards, and 4,482 in rural districts or in cities and towns with less than 8000 inhabitants. In the 2100 private high schools,

academies, and denominational institutions in the United States there was reported an enrollment of 107,633 secondary students, or a little less than 21 per cent. as against 79 per cent. enrolled in the public secondary schools. The total number of secondary students in both public and private secondary schools shows that there is an average of 819 such students in every 100,000 of the population of the United States. In the department of higher education the ratio is 196 students to each 100,000 inhabitants.

High School Courses of Study. — It would be outside of the scope of this chapter to treat of high school courses of study, but I cannot forbear quoting a paragraph from the pen of Professor Paul H. Hanus, of Harvard University, which presents a matter of vital importance to secondary schools.

"The efforts to improve the secondary or high-school courses of study, like the corresponding efforts for the improvement of the grammar-school courses of study, have been directed to an enlargement of its scope (content) and such modification of its form as would best adapt it to modern needs. In bringing about these very desirable changes in the high-school course of study the West has rendered important service. In those newer regions traditions have had less weight in determining educational practice, and the non-classical high-school courses have thrived there especially. A very important incidental gain, traceable largely to these modifications in the high-school course of study made in response to external demands, deserves to be noted here. These modifications have had much to do with insuring the permanence of the public high school as an integral part of our public-school systems. . . . At the present time the public high school may justly be said to be firmly established throughout the country. These are great gains. At the same time, however, another important modification is gradually finding recognition in our secondary-school programmes. Not only may the pupil choose one of several courses of study offered to him in every considerable high school, but

choices are permitted within these courses, and there are schools — and the number of such schools is increasing — in which at least one course of study, the 'general course,' which is not determined by college admission requirements, is entirely elective throughout. That is to say, not only does the modern high school aim to provide an introduction to the culture and training demanded by modern life, but in so doing it seeks also to adapt its opportunities and demands to the tastes and capacities of individuals. The importance of this change in our secondary-school opportunities it is difficult to overrate."¹

THE BEGINNINGS OF NORMAL SCHOOLS.

The First Training Schools. — During the colonial period and for nearly half a century after, the common schools were mainly supplied with teachers by the academy, the seminary, and the college. But after the war of 1812-15, the great increase of schools in commercial cities and manufacturing towns and villages, created a demand for teachers having some special training for their work. Rev. Samuel R. Hall opened in the town of Concord, Vermont (1823), a private school for the training of teachers, which he continued for seven years. Mr. Hall, when a young man, teaching his first common school in the state of Maine (1815), showed his radical tendencies towards innovations by introducing the writing of compositions, which excited a storm of protests from parents and pupils. In 1829 he published one of the first notable American books on common school pedagogics, entitled, "Lectures on School Keeping." In 1830 he took charge of a teachers' department in the Phillips-Andover Academy, and also established a private normal school at Plymouth, New Hampshire.

The state of New York made an experiment (1830-44),

¹ *Educational Review*, December, 1896.

in establishing teachers' departments in incorporated academies by a system of state appropriations for that purpose. Such departments were organized in sixteen academies, but the results fell short of expectations, and state aid was withdrawn on the passage of an act (1844), to establish a state normal school at Albany.

Meanwhile, in New England, the normal-school idea was brought before the public by a group of educational reformers of remarkable ability and zeal. Among these were James G. Carter, Rev. Samuel R. Hall, George B. Emerson, Professor William Russell, Rev. Charles Brooks, Edmund Dwight, Thomas Gallaudet, Horace Mann, Henry Barnard, and many others.

The *American Journal of Education*, one of the first in the English language, appeared (1826), in Boston, edited by William C. Woodbridge, William Russell, and William A. Alcott; the Massachusetts *Common School Journal* (1839), was started and edited by Horace Mann; the New York *Common School Assistant* (1836-40) was edited and published by J. Orville Taylor; and a Connecticut *School Journal* (1838), was edited by Henry Barnard.

A society for the improvement of common schools was organized (1827), in Connecticut; a similar society in Pennsylvania (1828); another in Ohio (1829); the American Institute of Instruction, in Massachusetts (1830); the American Common School Society (1838), New York.

All these combined influences resulted in the beginning of a great upward extension of the common-school system by including in it the public high school and the state normal school.

Public Normal Schools.—The first public normal school in the United States was opened at Lexington, Massa-

chusetts (1839), with Cyrus Pierce as principal; the second at Barre, Massachusetts (1839); the third at Bridgewater, Massachusetts (1840); the fourth at Albany, New York (1844); the fifth at New Britain, Connecticut (1849); the sixth was established at Ypsilanti, Michigan (1850), but was not opened until two years later. At the middle of this century (1850), there were only six state normal schools in the United States.

Concerning the immediate results of the three pioneer state normal schools in Massachusetts, Mr. George H. Martin says:¹ "Their early graduates encountered everywhere prejudice and suspicion, in many cases active and persistent opposition; but steadily, year by year, they fixed themselves more and more firmly in public estimation and support."

Since 1850 state normal schools have been rapidly multiplied and have become, like the high schools, an essential part of the public-school system. Local normal schools are maintained by the cities of New York, Philadelphia, Chicago, Boston, St. Louis, Cincinnati, and Baltimore; and many other cities have normal classes in connection with high schools.

The total number of state and municipal public normal schools (1896-97) was 164. Of these schools Pennsylvania and New York had 14 each; Massachusetts, 9; North Carolina, West Virginia, and Wisconsin, 7 each; Alabama, Ohio, and Iowa, 6 each; California, 5; and other states had varying numbers from 4 each in Maine and Connecticut, to 1 each in New Mexico, Arizona, and Oklahoma. The total enrollment in public normal schools was 43,197 students. In the public normal schools for colored students, the Southern States reported an enrollment of 1800. The number of graduates from public normal schools was 8,032, of which number 62.6 per cent. were women. The

¹ "Evolution of the Massachusetts Public School System" (1894).

aggregate amount of public appropriations for the support of these schools was nearly two and one-half millions of dollars.

The public colleges and universities reported 1,839 normal students; and public high schools having normal departments reported 9,001 normal students. In 198 private normal schools there were 24,181 students; in private universities and colleges, 4,650, and in private high schools, 7,064. The aggregate of normal students in all public institutions was 54,039; in all private institutions, 35,895.

STATE PUBLIC UNIVERSITIES.

Colleges.—The colleges founded in colonial times and during the first half century after the Revolution were, in the main, denominational or non-public institutions, supported, like the primitive colonial public "grammar schools" and academies, by endowment and by tuition fees, though sometimes aided by public appropriations. Their chief purpose was to fit young men for the professions of law, medicine, and the ministry. Little or no provision was made for the higher education of women. But within the last half of this century, the enormous expansion of industrial, mechanical, and commercial pursuits, has created the imperative need of a modified type of the higher education adapted to the new environment. This demand has been intensified by the powerful upward pressure of the public high schools, by the demands of women for equal education, and by the more general diffusion of science among men.

Endowed State Universities.—The germ of free state universities is found in the land act of July 23, supplementary to the ordinance of 1787, which reserved for each new state to be formed out of the Northwest Territory, two entire townships of public lands (46,080 acres) for the purpose of aiding the establishment by each state

of a "seminary of learning," or, in other words, a state college, or university. This original act of 1787 set the precedent for a series of subsequent acts and land grants by the Federal government in aid of state colleges and universities.

Under the land act of 1787 and its successors in direct line up to 1889, the Federal land grants specifically for "seminaries of learning," that is, state universities, amounted to 20,000 square miles, estimated to have realized five millions of dollars.

Many of the states, following the example of the general government, have endowed their universities by grants of state lands. But endowments furnish only an incidental part of university revenue. Like other public schools, the state universities are supported mainly by direct state taxation.

These universities are flourishing with great vigor. They represent the best thought of the American people. They have strengthened and stimulated the high schools, normal schools, and common schools. They are organized in general with elective courses of study which include science as well as literature and metaphysics. Most of them, like the common school and the high school, are open to young men and women on equal conditions. They have pedagogical departments for the training of teachers. They are closely connected with the human life of to-day. They fit some students for the professions, and others for the highly differentiated industrial, commercial, mechanical, and business pursuits of a complex civilization. More than any other agency they have brought the higher education home to the common interests of mankind. They have opened to talented and ambitious students, gifted by nature but born to poverty,

the doors of the higher education which before had been barred by tuition fees.

The state universities in Ohio, Illinois, Indiana, Michigan, Iowa, Wisconsin, Minnesota, Kansas, Missouri, the Dakotas, and Nebraska, represent the culmination of a strong common school system in the North Central division of states. In 1897 Michigan University had 2878 students, including professional departments; Minnesota, 2647; Illinois, 2356; and Wisconsin, 1650.

The University of Texas, representing the southwest, is the crown of a public-school system richly endowed by the reservation of the sixteenth and thirty-sixth sections of each township in the vast domain of that state.

On the Pacific coast the State University of California, founded in 1868, is a natural sequence of the ordinance of 1787 and the land-grant act of 1862. Its doors are open, without tuition fees, to 1700 young men and women within the university proper, and to 3000 students, including its affiliated colleges of law and medicine. It has a strong pedagogical department. It has numerous elective courses in language, literature, science, philosophy, history, the mechanic arts, agriculture, horticulture, and viticulture. It is liberally supported, in the main, by direct state taxation, though it has an endowment fund derived from state and Federal land grants, and has received several large bequests from educational philanthropists. It is an integral part of the public-school system of California, intrenched in the state constitution, and held in trust by a board of regents appointed by the governor of the state.

California is fortunate in having another free university which, though not under direct state control, has all the other characteristics of a modern state university. Stan-

ford University, founded and endowed by Mr. and Mrs. Leland Stanford (1890), is open to both men and women; it has the elective system in studies; it has a department of pedagogics; it has no tuition fees. Opened in 1891, it has now more than a thousand students.

The state universities of Washington and Oregon are yet in their infancy, but are rapidly growing. In the other states of the western mountain division—Colorado, Montana, Wyoming, Idaho, Utah, Nevada, and the territory of Arizona—the public-school system is well established, and state universities and colleges of agriculture and the mechanic arts are taking root.

In the older states along the rim of the Atlantic, non-public, quasi-public, and denominational colleges and universities, grown powerful by age and by great endowments, still chiefly hold the field of higher education. But the tuition fees of most of these institutions are not high. Moreover, many of them, broadened, liberalized, and modernized, exercise most of the functions of state universities. To this class belong Cornell, Harvard, Yale, Columbia, Johns Hopkins, and the universities of Pennsylvania, Virginia, and North Carolina. Cornell, indeed, is to all intents and purposes a state university, because it has a college of agriculture and the mechanic arts richly endowed by the land grant of the act of Congress (1862), and because it annually receives a fixed number of students free from tuition rates. Harvard University received in its infancy liberal appropriations from the commonwealth of Massachusetts, as did Yale from Connecticut, Columbia from New York, and the universities of Pennsylvania, Virginia, the Carolinas, and Georgia from their several states.

University Departments of Pedagogy.—The normal

idea began to appear in the State University of Iowa in 1855 in the form of elementary instruction, and in the State University of Missouri in 1856, in which institution it took shape as a normal college department in 1867. The early state-university pedagogical departments were established in order of time as follows: Iowa (1873); Michigan (1879); Wisconsin (1881); North Carolina (1884); Indiana (1886).

Within the decade of 1887-97 pedagogical departments have been opened in the state universities of California, Colorado, Kansas, Nevada, Ohio, Pennsylvania, Minnesota, Mississippi, South Dakota, South Carolina, Tennessee, Utah, West Virginia, and Washington. In several other state universities there are classes of normal students, but no organized pedagogical departments. Pedagogical departments have also been opened in numerous colleges and universities not under state control, such as Cornell, Harvard, Stanford, Chicago, Clark, Brown, Columbia, and New York city.

It seems a fitting close to this chapter to quote a thought from the president of the oldest university in the land, who has been the pioneer in leading the way up to the modern idea of elective courses of study in all institutions of learning, whether public or non-public. Charles W. Eliot says:¹

"As a force in the world, universal education does not go behind this century in any land. It does not go back more than twenty years in such a civilized country as France. It dates from 1871 in England. Plato maintained that the producing or industrial classes needed no education; and it is hardly more than a hundred years since this Platonic doctrine began to be seriously questioned by social philosophers. It is not true yet that education is universal even in our own land; and

¹ "Educational Reform" (1898).

in all lands educational practice lags far behind educational theory. In this process of educational construction, so new, so strange, so hopeful, I believe that the chief principles and objects are the same from the kindergarten through the university ; and therefore, I maintain that school teachers ought to understand and sympathize with university reform and progress and that college and university teachers ought to comprehend and aid school reform and progress."

COLLEGES OF AGRICULTURE AND THE MECHANIC ARTS.

Industrial Education.—The demands of modern industrial pursuits first found expression in trade schools endowed by educational philanthropists, in manual training schools, and in polytechnic schools of various kinds. The constitution of Michigan (1850) contained a provision that the legislature should provide for the establishment of an agricultural school. Accordingly, the first state agricultural school was opened in 1857, at Lansing, the state capital. In 1850 the legislature of Michigan petitioned Congress for an endowment of 350,000 acres of land for the agricultural school provided for in the state constitution of that year, but the request was denied. It soon became evident that it would be a wise policy for the Federal government, following the lead of the ordinance of 1787, to extend indirect aid to a higher grade of technical institutions of learning, in which special instruction should be given in subjects relating to agriculture and the mechanic arts. Congressman Justin S. Morrill, of Vermont, introduced a bill into the House (1857) authorizing the establishment of industrial colleges, and granting to each state 20,000 acres of public land for each member of Congress. In 1858, the committee on public lands made an adverse report. At the following session the bill passed both houses, but was vetoed by President Buchanan.

In 1861 Mr. Morrill introduced an amended bill which was reported on adversely by the committee on public lands, but was passed in 1862, and was signed by President Lincoln. This bill persistently followed up for five years, in the face of the most determined opposition, entitles Senator Morrill to high rank as an educational statesman. This act reads, in part, as follows :

" Each state now existing and each new state admitted into the Union shall be entitled to as many times 30,000 acres of public land (not mineral bearing) as it had in 1860, or has, at the time of its admission, representatives in both houses of Congress. . . . The interest of the entire remaining gross proceeds of the grant shall be used for the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Land-Grant Colleges.—Under this act New York received 990,000 acres ; Pennsylvania, 780,000 ; Ohio, 630,000 ; Illinois, 480,000 ; Indiana, 390,000 ; Massachusetts, 360,000 ; Kentucky and Missouri, 330,000 each ; Virginia and Tennessee, 300,000 each, and other states in proportion to their number of Senators and Representatives in Congress. This act of 1862, with its successors up to 1889, yielded a total of 10,500,000 acres, estimated to be worth \$10,500,000. Some of this land was thrown upon the market by some states and sold for fifty or sixty cents an acre. Most of the land scrip issued to the state of New York (990,000 acres) was bought by Ezra Cornell for sixty cents an acre, on condition that whatever amount exceeding this price was derived from the sale of these lands after their location, should constitute a fund for the support of

the agricultural college of Cornell University. These land warrants were located with great business foresight on the pine timber lands of Wisconsin, held for some years, and sold at an average price of \$6.73 an acre.

These colleges were further aided by act of Congress, March 2, 1887, which provided that "there shall be established under the direction of the college or colleges, or agricultural departments of colleges, created by the law of 1862, in each state, a department to be known as an agricultural experiment station," and provided for an annual subsidy of \$15,000 to each state. By the act of Aug. 30, 1890, to more completely endow the colleges established under the law of 1862, it was provided that the annual appropriation of \$15,000 should be subject to an annual increase of \$1,000 until a maximum appropriation of \$25,000 annually should be reached. Provision was also made for a division of this subsidy between one school for white and one for colored students. The act of 1890 specifies that the appropriation shall "be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction."

These "land-grant" colleges were regarded, at first, with little favor by the older classical institutions. Small and feeble in the beginning, most of them have passed through the stage of experiment. Standards of admission are gradually made higher, and the number of students is rapidly increasing year by year. They are steadily growing in public favor, and are sending out skilled experts in agricultural, horticultural, viticultural, mechanical, and other technical pursuits. In a few states, they have been united with other endowed institutions, as in New York with Cornell University; in Indiana with Purdue University; in New Jersey with the Rutgers Scientific School; in Vermont with the University of Vermont; in Delaware with Delaware College. They are united with

state universities in California, Georgia, Illinois, Louisiana, Minnesota, Missouri, Maine, Nebraska, North Carolina, Nevada, Ohio, Tennessee, West Virginia, Wisconsin, Wyoming, and Arizona. Altogether there are sixty-six of these institutions, established under the Morrill acts of 1862 and 1890, sixteen of which are college departments of universities, and the remainder are separate institutions.

The sixteen colleges which are departments of state universities practically maintain a standard of admission equal to that of other department colleges in the university; that is, the completion of a high-school course for admission to the freshman class. The larger class of separate colleges, especially in the newer states, must receive its students from the eighth or ninth grade of the public schools. In other words, the standard for the time being is determined by conditions. This flexibility is in accord with the wisdom with which the common-school system has been adapted to meet successive stages of the political, social, and industrial advancement of the people. These colleges are winning their way in the face of criticism, opposition, and ridicule as did the common school, the high school, and the normal school in the days of their beginnings. Altogether they have an annual revenue of \$6,000,000, and give instruction to about 30,000 students.

At the meeting of the Association of American Agricultural Colleges and Experiment Stations,¹ Nov. 10, 1896, the Chairman, President J. E. Stubbs, President of the State University of Nevada, made an interesting summary of admission conditions, and courses of instruction offered in these colleges, from which the following brief statements are drawn: "Out of 46 colleges reporting, 16 have no sub-freshman class and 30 have preparatory departments. The institu-

¹ See Report of the Commissioner of Education, 1896-97, Vol. 1.

tions which have no preparatory departments are chiefly in the wealthy and populous states where there are first-class high schools in all cities and towns. In the newer and less populous states a well-equipped preparatory school of high-school grade, with courses of studies covering a period of three or four years, is a necessity, and will continue a necessity for many years to come." As to four-years' courses of study in these colleges, the statement is made that California, Purdue, Kentucky, Minnesota, Cornell, Virginia, and Wyoming, offer 7; Delaware, Idaho, Tennessee, and Wisconsin, 6; 13 give from 4 to 5; and 14 give one and two courses with numerous electives.

Federal Aid for Higher Education. — In the report of the Commissioner of Education (1896-97), there is found a report (Chapter XXIII), giving, in a condensed form the amount of Federal and state aid for the establishment of higher education. The total amount given by the United States for state universities, act of July 23, 1787, and its successors in direct line up to 1889, is 20,000 square miles of public land, realizing five millions of dollars; for State Colleges of Agriculture and the Mechanic Arts, act of July 2, 1862, and its successors, up to 1889, 15,000 square miles, realizing ten and a half millions of dollars; lands granted by act admitting seven new states since 1889, 3,260 square miles, realizing \$20,864,000. The annual appropriations of money from the United States treasury towards the support of agricultural colleges and experiment stations, by acts of 1887 and 1890, capitalized at four per cent., would represent an endowment fund of \$44,400,000.

The increasing power of state universities, agricultural and mechanical colleges and similar public institutions under municipal control, is made evident by the latest educational statistics.

The total enrollment of graduate and undergraduate students reported by public institutions for higher education was 27,654, an in-

crease of 1,358 over the previous year. The total number of students reported in the collegiate, graduate, and professional departments of institutions for higher education, public and private, and in professional schools, of all kinds, was 140,133, of which number 42,999 were enrolled as professional students pursuing studies in law, medicine, and theology, leaving 97,134 students reported as pursuing what are generally known as liberal studies. Of this latter number, 27,654 students belong to public institutions, and 69,480 in private, parochial, and other non-public institutions.

Higher Education.—In a paper read before the American Social Science Association, December, 1898,¹ William T. Harris made the following statements relative to the higher education:

"In 1872 the records of higher education show for the entire nation an enrollment of 590 students in each million of inhabitants,—a little more than one college student, on an average, for each community of two thousand population. Not only did the growth of schools for higher education keep up with the growth in population, but the enrollment increased, year by year, until in 1895, instead of 590 students we had 1190 in each million. The quota had doubled, and it has since increased. . . . The number of students reported as engaged in post-graduate work in all our colleges and universities in 1872 was only 189. This has steadily increased, doubling once in five or six years until in 1897 the number was 4419. They are twenty-five times as numerous. Professional students, too, have increased. The number studying law, medicine, and theology in 1872 was only 280 in each million of inhabitants. In 1896 the 280 had become 740 in the million. In the same quarter of the century, scientific and technical schools have multiplied. In the six years from 1890 to 1896 the number of students in engineering and applied science increased from 15,000 to 24,000."

NATIONAL SCHOOLS.

With the exception of a few Indian schools on various Indian reservations and in Alaska, there are only two great national schools established by act of Congress and supported entirely by direct appropriations of national

¹ Journal of American Social Science Association, 1898.

revenue. These are the United States Military Academy at West Point (1802), and the United States Naval Academy at Annapolis (1845). They are not usually considered as public schools, but they form in reality an important part of the American system of public education. They were established for training men in the art of war, and for purposes of national defense. Their annual cost is over \$800,000. Their value has been proved in every war since their establishment, but was never more clearly demonstrated than in the recent war with Spain. The skilled naval officers who destroyed the Spanish navy at Manila and off Santiago were educated in the Naval Academy. All these great sea-captains write in praise of the skill and valor of the engineers, gunners, firemen, and seamen who were trained in technical schools, and common schools. West Point supplied, in part, the trained army officers. The rank and file who stormed the Spanish intrenchments at El Caney and San Juan had been trained, some in common schools, some in high schools, some in college and university, but whether regulars or volunteers, ex-federals or ex-confederates, cow-boys, or college graduates, they proved themselves equals in patriotism and valor.

A NATIONAL UNIVERSITY.

There remains one more stage of development to complete the American public-school system,—the establishment of a free national university in the national capital, which shall utilize the great museums and libraries and government scientific departments at Washington, and represent the culmination of the free state universities in one national institution of learning such as George

Washington hoped for when he bequeathed in his will half of his estate towards that noble end. In 1796, President Washington, in his message to Congress, urged the establishment of a national university as well as a military academy. His reasons for desiring a national university are set forth as follows :

"True it is that our country contains many seminaries of learning highly respectable and useful ; but the funds upon which they rest are too narrow to command the ablest professors in the different departments of liberal knowledge for the institution contemplated, though they would be excellent auxiliaries. Among the motives to such an institution the assimilation of principles, opinions, and manners of our countrymen by the common education of a portion of our youth from every quarter well deserves attention ; the more homogeneous our citizens can be made in these particulars, the greater will be our prospects of permanent union ; and a primary object of such a national institution should be the education of our youth in the science of government."

At various intervals during an entire century, Washington's recommendation has been a subject of discussion, but not of legislation. In 1899, President David Starr Jordan says of it : " In matters of education, no other agency can take the place of the combined effort of the people. To the end that a great university, worthy of a growing nation, should be established at the national capital, Washington left a large part of his property in trust to Congress to form the nucleus of such an establishment. The scholars and investigators now maintained at Washington exert an influence far beyond that of their official position. To the force of high training and academic self-devotion is to be traced the immense influence exerted in Washington by Joseph Henry, Spencer F. Baird, and Brown Goode. Of such men as these are universities made. When such men are systematically selected from our body of university professors and brought to Washington and allowed to surround themselves with like men of the next generation, we shall, indeed, have a national capital. A university is simply a contrivance for making wisdom effective by surrounding wise men with the conditions most favorable for rendering wisdom contagious."

CHAPTER IV

PUBLIC SCHOOLS AFTER THE CIVIL WAR

THE SOUTHERN STATES

Reconstruction. — When the Civil War was over and reconstruction completed, the people of the Southern states took up the common-school question with all the zeal of the early educational reformers in the North during the days of Horace Mann and Henry Barnard. "The South," says Dr. A. D. Mayo, "that so long remained outside the expanding circle of the common school, has responded to the cry of the children during the last twenty years by the most remarkable achievement in the organization and support of popular education recorded in history."

During the reconstruction period (1866-76) all the Southern states made provisions in their new constitutions for establishing a system of free public schools. The situation was complicated, because separate schools were required for the children of the colored race. Moreover, civil government was unsettled, and the people, exhausted by the Civil War, were poor. The pioneer educators in the new states of the Northwest or of the Pacific states can realize from their own experience, in some measure, the untiring efforts and devotion to duty necessary to provide for a general system of education,—a work which required the combined energies of educators, philanthropists, and statesmen.

The preliminary steps were taken when General John Eaton, afterwards U. S. Commissioner of Education, was ordered by General Grant to look after the freedmen in Tennessee and Arkansas, and to open schools for colored children wherever it was possible to do so. In 1864 a considerable number of schools was opened in and around Vicksburg and Memphis, so that in 1865 the reports showed a school attendance of 7000 pupils.

The Freedman's Bureau.—The Freedman's Bureau, attached to the War Department, was organized in 1865, and a part of its work was educational. General O. O. Howard, the Commissioner, entered vigorously on his duties. In 1867 he reported to the Secretary of War that \$115,000 had been expended for schools. His later official reports show that, from 1866 to 1870, about \$2,600,000 was expended for school purposes.

Dr. J. M. L. Curry states that the American Missionary Association was the chief body, apart from the government, in the great enterprise of meeting the needs of the colored race. Its expenditures from 1860 to 1893 in the South for freedmen, including church extension as well as education, amounted to \$11,600,000.

The Peabody Fund.—George Peabody, educated in a Massachusetts common school, placed in the hands of a board of trustees of which Robert C. Winthrop was president (1867), a fund of \$2,000,000 to be used "for the promotion and encouragement of intellectual, moral, or industrial education among the young of the more destitute portions of the Southern states of our Union."

Dr. Barnas Sears, the general agent of the trustees, wisely presented the plan of confining aid to public schools, allowing them partial support, but requiring the people to tax themselves for the remainder necessary to

maintain the schools. He said: "The object of the Peabody Education Fund is free schools for the whole people, neither more nor less. We have nothing in view but what is comprised therein."

Robert C. Winthrop, president of the trustees, said in his address at the Yorktown Centennial celebration: "There must be aids and appropriations, and endowments by cities and states, and by the nation at large through its public lands if in no other way, and to an amount compared with which the gift of George Peabody—munificent as it was for an individual benefaction—is but the small dust of the balance. . . . The whole field of our Union is now open to education, and the whole field of the Union must be occupied. This government must stand or fall with free schools. These and these alone can supply the firm foundation, and that foundation must, at this very moment, be extended and strengthened and rendered immovable and indestructible."

The Slater Fund.—John F. Slater, educated in a Rhode Island common school and academy, made a bequest of \$1,000,000 (1882), and placed it in the hands of a board of trustees, of which Rutherford B. Hayes was president. The income from this fund was to be expended in aiding education in the Southern states. In his letter to the trustees Mr. Slater expresses his purpose as follows: "The general object which I desire to have exclusively pursued, is the uplifting of the lately emancipated population of the Southern states, and their posterity, by conferring on them the blessings of Christian education. . . . But it is not only for their own sake, but also for the safety of our common country in which they have been invested with equal political rights, that I am desirous to aid them with the means of such education as shall tend to make them good men and good citizens. . . . The means to be used in the prosecution of the general object above described I leave to the discretion of the corporation, only indicating as lines of opera-

tion adapted to the present condition of things, the training of teachers from among the people required to be taught." The trustees decided that students should be trained in some manual occupation simultaneously with their mental and moral instruction, and confined their aid exclusively to such institutions "as were, with good reason, believed to be on a permanent basis." The trustees paid out for educational aid from 1884 to 1894 the sum of \$439,000.

Dr. J. L. M. Curry, secretary of the John F. Slater Fund, in an exhaustive paper on the "Education of the Negroes since 1860,"¹ makes the following statements in relation to education in the South: "All the states of the South, as soon as they recovered their governments, put in operation systems of public schools which gave equal opportunities and privileges to both races. It would be singularly unjust not to consider the difficulties—social, political, and pecuniary—which embarrassed the South in the efforts to inaugurate free education. It required unusual heroism to adapt to the new conditions, but she was equal in fidelity and energy to what was demanded for the reconstruction of society and civil institutions. The complete enfranchisement of the negroes and their new political relations, as the result of the war and the new amendments to the Constitution, necessitated an entire reorganization of the systems of public education. Comparisons with densely populated sections are misleading, for in the South the sparseness and poverty of the population are almost a preventive of good schools. Still the results have been marvelous. . . . The urban population is small and agriculture is the chief occupation. Of the 858,000 negroes in Georgia, 130,000 are in cities and towns and 728,000 in the country; in Mississippi, urban colored population 42,000, rural 700,000; in South Carolina, urban 66,000; against 498,000 rural; in Alabama, 65,000 against 613,000; in Louisiana, 93,000 against 466,000. While the colored population supplies less than its due proportion of pupils to the public schools, and the regularity of attendance is less than with the white, yet the difference in length of school terms in schools for white and schools for black children is trifling. In the

¹ Report of the Commissioner of Education, Vol. 2, 1894-95.

same grades the wages of teachers are about the same. The annual State school revenue is apportioned impartially among white and black children, so much per capita to each child."

In 1893-94, the common-school enrollment of colored pupils in the sixteen former slave states and the District of Columbia was 1,425,000 as against an enrollment of white pupils of 3,835,000. "In 1880, on my first visit to the South," says Dr. Mayo, "I found these public schools everywhere acknowledged models and centers of light. Their boards of education were composed of the leading men of the community, who gave character to the movement and from the first assured its success. It would be impossible to make a Northern public fully understand the enthusiasm I witnessed in scores of villages and cities, extending the 'whole region roundabout,' awakened by the strange and beautiful spectacle of all the children going to school together, instructed, disciplined, and interested in a way that had never been known before in the memory of the oldest inhabitant."

School Organization. — The following exact statement is quoted from an exhaustive paper on "The Social Unit in the Public School System of the United States," by Mr. Wellford Addis, Specialist in the Bureau of Education:¹

"It seems legitimate to conclude that the school systems of the southeastern and southern coast are systems of state schools, while in Massachusetts, to take the most striking example, the school system is a town (ship) system, though most freely directed by the legislature to carry out reforms or inaugurate innovations. Five Southern states have a county board as the real local school authority. In one of these (Florida) the county is divided into three districts, and a member of the board is elected from each; in another (Georgia) the grand jury choose the county board; in another (Mississippi) the county board is

² See Report of the Commissioner of Education, Vol. 2, 1894-95.

composed of a member from each supervisor's district appointed by the states superintendent, and in the fourth and fifth the county board is appointed by the governor. The other states of our southern coast have a county superintendent as the local school authority, who is appointed in Alabama and Virginia by the state superintendent, and in South Carolina (under the old law) by the people.

"North Carolina has no county superintendent, and its schools are under authority of its 'county commissioners' sitting as a 'county board of education.' The more local or district authority, as far as it occurs, is appointed by the county authority, except in Mississippi, where the 'patrons' elect three district trustees, and in Virginia, where an electoral board, composed of the county judge, commonwealth attorney, and county superintendent, elect the district boards for the school subdivisions of the county."

Recent Statistics. — The report of the Commissioner of Education (1896-97), shows that the total school enrollment in the sixteen Southern states and the District of Columbia was 5,398,000, the number of colored pupils being 1,460,000, and the number of white pupils 3,938,000. In Louisiana, Mississippi, and South Carolina the colored school population exceeds the white school population. The total expenditure for the public schools of this section was \$31,145,000. The estimated cost of colored schools alone is \$6,575,000. Since 1870 the total amount of money expended in the Southern states has reached \$514,922,000, of which it is estimated that \$100,000,000 has been expended on schools for colored children.

Secondary and Higher Education.—The Report of 1896-97 shows that in the 169 schools of all kinds, public and private, in the United States, exclusively for the education of the colored race, there was an enrollment of 45,402 students. Of these schools all but nine were in the Southern states. In the secondary grades there were 15,203 students, and in collegiate grades 2108 students. Separate state institutions belonging to the class of

"land-grant" colleges, receiving their share of the Congressional subsidy for such colleges, have been established for colored students in Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, South Carolina, Texas, Virginia, and West Virginia. One of the most notable of these schools is the Hampton Normal and Agricultural Institute in Virginia (1870). Dr. Mayo tells the story of this school as follows :

"The one great educational genius developed by the Civil War was General S. C. Armstrong. Born in Hawaii, educated in Massachusetts, a brave soldier and a worker with the colored people during the war, he established at Hampton, close by the beach where the first slave ship landed, the most original and characteristically American and missionary organization for the uplifting of the humbler classes, still the majority of mankind, now in existence. The Hampton system combines all that can be done for the lower orders of mankind in one institution. It organizes worship on unsectarian basis, establishes military discipline and training in a soldier's life for the boys, compels every pupil to learn some method for self-support, introduces the girls to new modern ways of home life, organizes the principal industrial occupations, gives instruction in English in a good graded system, with a great normal school at the center for teachers, and through its summer schools reaches outward. On the one hand, it joins hands with the state of Virginia, and on the other, with the nation, in the training of the negro and the Indian, and with no complications appeals to the American people for support. Armstrong wore himself out in a ministry of education, died in middle life, and, like the good soldier he was, asked for a soldier's funeral."

The Tuskegee Normal and Industrial Institute, Alabama, receives from the state a small appropriation, and is further aided by contributions from philanthropists. The story of this school is an object lesson in education, and I let the founder and president of the institution give it in his own words. In an address on the "Industrial Edu-

cation of the Blacks"¹ (1896), Booker T. Washington spoke, in part, as follows:

"I was born a slave on a plantation in Virginia in 1857 or 1858, I think. . . . With the long prayed freedom in actual possession, my mother decided to locate in West Virginia. Soon after, I began work in the coal mines for the support of my mother. While doing this I heard in some way of General Armstrong's school at Hampton, Va. I heard at the same time that it was a school where a poor boy could work for his education so far as his board was concerned. I began at once to save every nickel I could get hold of. At length, with my own savings and a little help from my brother and mother, I started for Hampton. . . . I at once found General Armstrong and told him what I had come for, and what my condition was. In his great hearty way he said that if I was worth anything he would give me a chance to work my way through the institution. . . . While at Hampton I resolved, if God permitted me to finish the course of study, I would enter the far South, the black belt of the Gulf States, and give my life in providing as best I could the same kind of chance for self-help for the youth of my race that I found ready for me when I went to Hampton, and so in 1881 I left Hampton and went to Tuskegee and started the Normal and Industrial Institute in a small church and a shanty, with one teacher and 30 students. Since then the institution of Tuskegee has grown till we have connected with it 69 instructors and 800 young men and women representing 19 states. . . . From the first, industrial or hand training has been made a special feature of our work. While friends at the North and elsewhere have given us money to pay our teachers and to buy material which we could not produce, still, very largely by the labor of our students, we have built up within about fourteen years a property that is now valued at \$225,000; 37 buildings, counting large and small, located on 1,400 acres of land, all except three of which are the product of student labor."

Taxation for Public Schools.—The burden of school taxation in the Southern states has been heavy and it must long remain so. The people fully realize that while

¹ Address at the dinner in honor of Alexander Hamilton, Brooklyn, N. Y., 1896. Report of Commissioner of Education, Vol. 2, 1894-95.

endowments, bequests, and denominational appropriations may aid them, to some extent, in educating some of the children, the main support of the public schools for the great mass of children must be derived from a regular and unintermittent revenue derived from state and local taxation. Heavy as the burden is, it is no greater, relatively, than it was in New England during the period when the common schools first gained a foothold in the world. The graded schools of cities and large towns in the South now differ but little from the urban schools in other parts of the United States; the rural schools, as in all other sparsely populated states, will be subject, as in other states, to slow development.

THE PACIFIC STATES.

For a brief typical study of this section, we may take California, which was acquired by conquest in the Mexican War and was ceded by Mexico to the United States in 1848. Owing to the discovery of gold this region was rapidly filled up by emigrants from every state in our own country and from most of the nations of the old world. California was admitted as a state (1850) without the usual preliminary stage of a territorial government. The state constitution, framed and adopted by the people in 1849, provided for the election of a state superintendent of public instruction by the people for a term of three years; made it the duty of the legislature to "provide for a system of common schools by which a school should be kept up in each school district at least three months in every year; and provided that the proceeds of school lands should constitute a perpetual fund to be inviolably appropriated to the support of common schools, and to protect any land grants for a state university."

State Legislation.—At the first session of the legislature (1849-50) no school law was enacted, the Committee on Education reporting "that the taxes laid on the people, for state, county, and municipal purposes were so heavy, the committee did not deem it advisable to report a bill to tax the people still further for the support of public schools." At the second session of the state legislature (1850-51) a school law was enacted, providing for the subdivision of counties into school districts; for a district school committee of three, elected annually by direct vote of the people; gave the school committees power to build schoolhouses, to examine and appoint teachers, and to report to the state superintendent. David C. Broderick, afterward U. S. senator from California, educated when a boy in the public schools of New York city, was an active supporter of this bill. In 1852, the imperfect act of the preceding year was amended by making county assessors *ex officio* school superintendents; and by authorizing counties to levy a school tax "not to exceed three cents on a hundred dollars"—a meager provision for a flourishing and already populous state.

This law also contained a section which enabled the parochial schools to secure a pro rata of the public school moneys, a provision which led to several bitter contests in the state legislature for a period of ten years.

School Beginnings.—Meanwhile, the people of American descent set to work and organized schools, after the manner of their ancestors on the Atlantic coast in early days, without any law other than local ordinances. In the town of San Francisco, October 11, 1847, a committee of "Town Council" (*Ayuntamiento*) built a small one-room schoolhouse on the corner of the town plaza (now Portsmouth Square), and on February 23, 1848, a small num-

ber of townsmen held a meeting and elected the first school committee in California, consisting of seven members. This school committee appointed as teacher, Thomas Douglass, a graduate of Yale College. The school was opened in April, 1848, with six pupils. This was a public school, mainly supported by tuition fees, but indigents were admitted as charity pupils, after the manner that prevailed in public and parish schools two hundred years before in Virginia, Pennsylvania, and New York. The town council agreed to pay for these charity pupils the sum of \$400 towards the support of the school. But this school was short-lived. When the stampede for the gold mines became general the school dwindled down to eight pupils, and schoolmaster Douglass joined the prospectors and set out for the mountains. In December, 1849, Mr. and Mrs. John C. Pelton opened a school supported by "voluntary subscriptions," but free to the "children of the poor." This school was made a free public school by ordinance of the Common Council of San Francisco, April 8, 1850, and John C. Pelton was appointed as teacher, in which position he continued until September 25, 1851. During this period (1848-51), numerous small private schools and denominational schools were opened in San Francisco and other parts of California where the population had become grouped into villages and small towns, such as Sacramento, Stockton, San Jose, Santa Clara, Nevada City, Grass Valley, Rough and Ready, etc. At this time the total number of children in the state between 4 and 18 years of age was estimated to be about 6,000. Outside of San Francisco, there were only a few feeble public schools, and the history of these is known only by tradition.¹

¹Swett's "History of the Public School System of California."

Further State Legislation. — At the third session of the Legislature (1851-52) Frank Soule, chairman of the senate committee on education, made an able report in favor of common schools and introduced a revised school law containing several important provisions in advance. This law, as approved May 3, 1852, created a state board of education, consisting of the governor, surveyor general, and state superintendent; defined the duties of all school officers; authorized the common council in incorporated towns to raise a school tax not to exceed three cents on a hundred dollars, and fixed the county tax at the same rate; and provided that no school should receive any apportionment of public money unless free from all denominational and sectarian bias, control, or influence whatever. This last provision was rendered necessary from the fact that under the previous law (1851-52), parochial schools had obtained a pro rata of public moneys.

School Beginnings in San Francisco, 1851-53. — The first city school ordinance passed under the state school law of 1851, was that of San Francisco, adopted September, 1851, which provided for a city board of education and a city school superintendent, and appropriated \$35,000 for the support of schools. During the formative period of 1851-53, among the small group of school principals, James Denman was a graduate of the Albany (N. Y.) State normal school; Ellis H. Holmes and Ahira Holmes were from the Bridgewater (Mass.) State normal school; and William Russell's Merrimack (N. H.) private normal school was represented by the writer of this history.

The first schools were held in rented buildings, small, rude, and cheap, and roughly fitted up for temporary

school purposes. For instance, the Happy Valley School (now the Denman School) occupied for a time a livery stable, sub-divided by thin board partitions. The Rincon School was held in a shanty half-buried in a sand bank. But these rooms were crowded with pupils. In 1851 there was an enrollment of 400 pupils; in 1852, of 600; in 1853, of 1500; and in 1856, of nearly 8,000, including 1,421 in the ward or parochial schools. The school appropriations, at first, were niggardly. The common-school spirit had not yet been developed. The new city was full of parochial and other denominational schools, and of small private schools. It required heroic efforts to organize and maintain common schools in the midst of a cosmopolitan population drawn from the four quarters of the globe. The political elements were unstable, and the tenure of teachers was uncertain. The Vigilance Committee, in 1856, purified the city, and for a decade the school administration was good, and prospects began to brighten.

The parochial schools of the Catholic Church were strong, and were attended by more than a thousand children. For several years these schools, known as ward-schools, received their pro rata of public-school moneys. This question became a vexed one in state legislation.

The first high school in San Francisco (1856) was started under the name of "The Union Grammar School," because some of the city officials held that a high school was not legally a common school. At the end of a year, however, the school was allowed to assume its proper name, "The English High School."

State Legislation Again. — At the fifth session of the legislature (1853-54), Hon. D. R. Ashley submitted a carefully-prepared school bill, but as it contained a section

that prohibited sectarian schools from receiving a pro rata of public school moneys, it was buried in the rubbish of unfinished business. During the next session (1854-55), Mr. Ashley introduced, in substance, his rejected school bill of the preceding year, which became a law May 3, 1855. This enactment provided among other things that no school should be entitled to any share of the public fund that had not been taught by teachers duly examined and approved by legal authority, and that no sectarian doctrines should be taught in any public school under penalty of forfeiting public funds.

In 1857, Andrew J. Moulder, a graduate of the University of Virginia, was elected to the office of state superintendent, which he held until 1863. From his varied experience as a teacher in a Virginia academy, and as a journalist in California, he brought to the office good qualifications for his work. He secured numerous amendments to the state school law, and his six annual reports afford a good record of the advancement in common schools.

In 1861, John Conness, afterwards U. S. senator from California, introduced a bill in the assembly, which became a law, providing for the sale of the 16th and 36th sections of school lands, and also that the proceeds should be paid into the state school fund. Thus, after many years of impracticable legislation in tinkering on township land bills, a practicable law was enacted by which in less than one year 200,000 acres were sold, and the proceeds applied to the state school fund.

Another attempt was made to secure a pro rata of school money for parochial schools; but it was defeated by the determined stand taken against it by Hon. John Conness.

Important school legislation was secured in 1865-66 by the enactment of the "Revised School Law"—a law drafted by the Superintendent of Public Instruction and passed almost without amendment. This law contained liberal provisions for state, county, and district taxation; and marked the beginning of free common schools in every rural district in the state. It fixed the rate of state school tax at eight cents on each hundred dollars of taxable property; the county school tax at a minimum of \$3.00 for each school census child, and the maximum at thirty-five cents on each \$100; authorized and required school trustees to levy a school tax sufficient to keep a free school five months in each year. It provided for a state board of education; for life diplomas for teachers; for district school libraries; for county institutes; for the election of district school trustees for a term of three years, one to be elected each year; and for many other details of a modern public school system.

State Taxation. — In 1874 the state school tax was increased to an annual levy of \$7.00 for each school census child, which yielded an annual school revenue of over a million of dollars. Another provision secured for each school district, even the smallest, a minimum annual apportionment of \$500, thus securing at least an eight months school in all rural district schools.

The original state tax of half a mill on the dollar was secured in 1864 by a petition to the state legislature from each school district in the state. There were nearly a thousand of these petitions, and the legislators were forced into an immediate compliance with the demands of their constituents. This petition, drafted by the state superintendent, and sent out for circulation in every school district, read as follows:

"Whereas, We believe that it is the duty of a representative government to maintain public schools as an act of self-preservation, and that the property of the state should be taxed to educate the children of the state; and whereas, the present school fund is wholly inadequate to sustain a system of free schools; we, the undersigned, qualified electors of the state of California, respectfully ask your honorable body to levy a special state tax of half a mill on the dollar, during the fiscal years 1864 and 1865, the proceeds of the same to be disbursed in the same manner as the present state school fund."

In 1866, the rate of state school tax was raised to eight cents on each \$100, and at a later period was more than doubled.

State Normal Schools. — The first state normal school was opened in San Francisco, July, 1862, with Ahira Holmes, of the Bridgewater Normal School, as principal. Henry P. Carlton was soon after appointed vice principal. In 1873 the school was removed to San Jose. Since that time additional state normal schools have been established at Los Angeles, Chico, San Diego, and San Francisco.

The State University. — In 1868, John W. Dwinelle drafted a bill and secured its passage in the legislature of which he was a member, providing for a state university with an agricultural college. The College of California, a liberal denominational college, founded in 1855, disincorporated and conveyed its grounds at Berkeley to the State University, which assumed the debts of the college. The State University opened its doors in Oakland, September 23, 1869, with Professor John Le Conte, of South Carolina, as acting president. In 1870, Henry Durant, of Yale, who had been president of the College of California, was elected president of the State University. The endowment fund of the State University, derived from Federal and state land grants, may be roughly estimated at two millions of dollars. A state tax of 10

cents on \$100 is annually levied for the support of the university, and liberal appropriations have been made from time to time for the erection of buildings. Several large individual bequests have been made to the university by educational philanthropists.

State Publication of Text-Books. — The special student will discover that most of the states made, at one time or another in their history, some blunder or some unfortunate experiment in school legislation. California made an ill-advised experiment by a law providing for the state publication of common-school text-books. This law was enacted during a period of great social agitation and industrial discontent. Various causes led up to this result. Under a law enacted in 1863-64, the State Board of Education was authorized to adopt a uniform series of school-books for rural school districts, which at that time included only about one third of the school children in the state. Incorporated cities and towns having special boards of education were left free to adopt their own text-books. This law was enacted on the repeated demand of the teachers assembled in state institutes. It had been found that district school trustees made ill-advised selections, or else made no adoptions whatever, leaving pupils to use whatever miscellaneous books they brought to school. This law worked well enough before the days of county boards of education; but by influences other than good public policy, San Francisco and all other incorporated cities were soon included in the state uniformity law. The question still remained a vexed subject of legislation. Finally, in 1885, a law was enacted which provided that the State Board of Education should edit or prepare a series of text-books, to be printed by the state printer, published by the state, and furnished to

pupils at the cost price of publication. At the outset, the majority of public-school teachers were opposed to this plan ; after an experience of fifteen years, the teachers are almost unanimous in condemnation of it.

Educational Evolution. — In a quarter of a century, California rapidly passed through all the successive stages of educational development, — first, private and denominational schools ; next, city schools ; then, ungraded district schools, partly supported by rate bills ; then free public primary and grammar schools ; and, in due time, high schools, normal schools, and a free state university. Incidental to this system, there were provided, as in other states, reform schools, institutions for the deaf and dumb and blind, and for feeble-minded children. In 1851, the public-school enrollment was less than 2000 ; ten years later it had increased to 18,000 ; in 1871, it was 64,000, and in 1875, to 130,000. The public school expenditures amounted in 1851 to \$33,000 ; in 1861, to half a million, and in 1875, to \$2,500,000. From 1850 to 1875, the total expenditure for school purposes, including state normal schools and state university, amounted to nearly \$25,000,000. The expenditure for public-school purposes in 1897 was \$5,748,000.

Other Western Mountain States. — The history of the school system of the other Pacific and Rocky Mountain states, — now classed by the Bureau of Education as the "Western Division," — resembles, in general outlines, that of California. Oregon had a slower development ; Washington and Colorado a quicker growth. The state universities of Washington, Oregon, and Colorado are exceptionally promising, and are based on well-organized systems of public schools. Idaho, Montana, Wyoming, Utah, Arizona, and New Mexico, are marching along

their mountain highways in the public-school procession. Alaska has its system of schools for Indians, in charge of the National Bureau of Education, and will soon have its common schools for white children, and in due time its state university and experiment stations.

In all this western mountain group of states the total public-school enrollment is 700,000, or 200,000 less than that of the New England states. Out of the total public and private school enrollment, only about six per cent are found in private schools. In the universities, colleges, and schools of technology, there are 5,300 students, 60 per cent of whom are in public institutions. In San Francisco, the largest city of this group of states, there were enrolled (1896-97) 39,000 pupils in public schools, and 8,000 in parochial and private schools.

THE NORTH ATLANTIC STATES.

New England. — In New England modern advancement has consisted chiefly in perfecting the schools all along the lines of original development. The district schools have given place to town schools placed under the supervision of educational experts; wise compulsory educational laws strictly enforced in all manufacturing cities, secure the rights of children to attend school at least a part of each year. Notwithstanding the influx of foreign operatives into cities, ample provision has been made for taking the children into well-planned and well-ventilated school buildings, where they are assimilated into American citizens. School attendance has been everywhere increased by furnishing text-books at public expense; and in rural districts by free public transportation to the central schools. In the city of Boston (1896-97), there were

82,000 children enrolled in the public schools, and 12,000 attending parochial and private schools.

In Massachusetts the doors of the high schools are open to all girls and boys who are fitted to enter them and desire to do so, transportation of pupils remote from school being paid for at public expense. Here is what William T. Harris said in 1894:¹

"I find, by the returns made to the National Bureau of Education that the total amount of school education that each inhabitant of Massachusetts is receiving on an average—basing the calculation on the attendance in public and private schools and the length of the annual school term—is nearly seven years of two hundred days each, while the average schooling given each citizen in the whole nation is only four and three-tenths of such years. No other state is giving so much education to its people as Massachusetts, and yet all the education given in all its institutions does not amount on an average to so much as seven eighths of an elementary education of eight years. Even Massachusetts is not over-educating the people. But there would seem to be some connection between the fact that, while her citizens get nearly twice the national average amount of education, her wealth-producing power as compared with other states stands almost in the same ratio—namely (in 1885), at seventy-three cents per day for each man, woman, and child, while the average for the whole nation was only forty cents."

New York and Pennsylvania. — Of all the states, New York ranks highest in the number of pupils enrolled on public-school registers, having a total enrollment of 1,200,000, and Pennsylvania is a close second with 1,140,000. Each state has fourteen large and well-equipped public normal schools. Each state has a strong system of high schools. Each state has an effective system of common schools, differing in details, but each accomplishing the

¹ Editor's Preface to "Evolution of the Massachusetts Public School System," by George H. Martin.

main purpose of educating the people. Both states have their public and non-public colleges and universities, of which they are justly proud. Including the school enrollment in New Jersey (295,000), and the New England states (907,000), the total public school enrollment of the Northern Atlantic Division is 3,545,000. According to the Report of the Commissioner of Education, 1896-97, in the city of Philadelphia, there were 168,000 pupils enrolled in public schools, and 42,000 in parochial and private schools.

The school system of New York city has recently been reorganized and the executive power has been centralized. In 1896, an act of the state legislature provided for a city board of education for New York city, consisting of 21 commissioners of common schools, appointed by the mayor, for a term of three years, one third to be appointed annually. The board have full control of public schools and of the public-school system of the city, subject only to the statutes of the state. Teachers are appointed by the board on the written nomination of a majority of the board of school superintendents. The city must be divided into fifteen inspection districts, for each of which there is a board of school inspectors of five members, appointed by the mayor for a term of five years, one inspector being appointed each year. The local or ward boards elected by popular vote are abolished. Under this law high schools have been established, and kindergarten schools opened. This law is typical of the present tendency in all great cities to a centralized management of schools, under the inspection of educational experts. The new charter of San Francisco, adopted in 1899, provides for a board of education of four members, appointed by the mayor, and each paid a salary of \$3,000 a year.

The growth of New York city in recent years has been so rapid that it has been difficult for the schools to keep pace with the population. At the opening of the schools in September, 1898, there were 15,000 children clamoring in vain for admission into the over-crowded public schools. Under the imperative demands of the public press, temporary rooms were rented for most of these children, and measures proposed for issuing bonds to the amount of \$9,000,000 for the erection of suitable modern school-houses. In 1897 there were estimated to be 40,000 children in this city attending parochial and private schools, and 226,000 enrolled in the public schools. Yet there is not room enough to accommodate the children clamoring for admission into the public schools. One great drawback on the public schools of New York city, for the last quarter of a century has been the over-crowded school-rooms and the great number of pupils to each teacher. This condition of things exists in Chicago and most of the other great cities.

THE NORTH CENTRAL STATES.

The Northwest Territory. — In this central seat of population, made secure to public schools and free labor by the ordinance of 1787, the American public-school system has full and free development. Here, in the five states formed out of the original Northwest Territory — Ohio, Indiana, Illinois, Michigan, and Wisconsin — there are now enrolled in the public schools 3,215,000 pupils, — an enrollment lacking only 30,000 of being equal to the combined enrollment of New York, Pennsylvania, and the New England States taken together. Here, also, are enrolled in all institutions, public and private, for the higher edu-

cation, 17,000 students, of whom one half are in public colleges and universities. Here are growing up great state universities like those of Michigan and Illinois. Here is the University of Chicago, which resembles the modern state university in most respects except in name. Here, too, are congregated the notable leaders of the American-Herbartian methods of instruction, who are bringing common-school methods of instruction into accord with psychological principles and the needs of modern social conditions.

Other States. — If we add to these five states the other states included in the *North Central Division* — Minnesota, Iowa, Missouri, Nebraska, the Dakotas, and Kansas, — we find a public school enrollment of 5,587,000 pupils, or more than one-third of the entire enrollment of the republic. These states, with one exception, came into the Union under conditions similar to those of the Northwest-Territory states. Missouri, which remained so long on the border line of North and South, East and West, is distinguished, educationally, by the public-school systems of St. Louis and Kansas city, and the work of William T. Harris and James M. Greenwood.

Turning to the great cities of this division we find a large school attendance in parochial and private schools, but in these states, as a whole, such attendance is comparatively small. The public schools of Chicago, like those of New York, are overcrowded with children, having an enrollment of 225,000 pupils; yet there are estimated to be 91,000 children attending parochial and private schools. The city of St. Louis has a public school enrollment of 75,000 and a parochial and private school attendance estimated at 25,000.

SOUTH ATLANTIC STATES.

In this division are included the states of Virginia, West Virginia, Delaware, Maryland, District of Columbia, North and South Carolina, Georgia, and Florida. The total common-school enrollment in these states in 1896-97, was 2,070,000, Georgia ranking highest in number (446,000), Virginia second (368,000), and North Carolina third (258,000). The city of Washington (D. C.), had a public-school enrollment of 42,000, and a parochial and private school attendance estimated at 5,000 pupils. In Baltimore the public-school enrollment was 76,000; the parochial and private school attendance was estimated at 16,000.

SOUTH CENTRAL STATES.

This division includes Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Arkansas, and Oklahoma. The total common school enrollment is 2,725,000, Texas ranking highest (616,000), Tennessee second (482,000), Kentucky third (400,000). The city of Louisville has a public-school enrollment of 26,000, and a parochial and private school attendance estimated at 8,000. New Orleans has a public-school attendance of 29,000, and no report on parochial or private school attendance. Nashville has in public schools an enrollment of 10,000; in parochial and private schools, 1,700.

CONCLUSION.

This chapter may be fitly closed by a quotation from the Report of the Commissioner of Education, 1896-97: "If the conditions existing in the year 1896-97 were continued indefinitely, what would be the average amount of

schooling per individual, counting it in school years of two hundred days each? I find that if we include public and private schools and higher education as well as elementary and secondary, the amount that each inhabitant would receive is 4.94 years."

The table which the commissioner submits shows the comparative rank by "divisions" as follows: North Atlantic, 6.50 years; North Central, 5.90 years; Western, 5.54 years; South Atlantic, 3.08 years; South Central, 2.83 years. Another table shows the total amount of schooling per inhabitant, considering only public elementary and secondary schools, to be 4.37 years. The "divisions" rank as follows: North Atlantic 5.61 years; North Central 5.29 years; Western 5.02 years; South Atlantic 2.78 years; South Central 2.49 years. This official exhibit does not seem to indicate that the republic, as a whole, is suffering from over education of the people.

The report of the Bureau of Education further shows that there were enrolled in the schools and colleges, both public and private, during the school year 1896-97, 16,255,093 pupils, being an increase of 257,896 over the preceding year. There were also enrolled 393,194 pupils in city evening schools, business schools, Indian schools, schools for defective classes, reform schools, orphan asylums, and miscellaneous schools. This makes the grand total of pupils and students in the whole nation 16,648,287.

CHAPTER V

COMMON-SCHOOL COURSES OF STUDY.

BRANCHES OF INSTRUCTION

In Colonial Schools. — The curriculum of the primitive colonial common school included only reading, writing, and arithmetic. For half a century the course in reading consisted of the hornbook, some church primer or catechism, the Psalter, and the Bible. In arithmetic the teachers used some English text-book, such as Cocker's or Hodder's, and dictated lessons to pupils, who carefully copied their work into blank-books. When the catechism and the Psalter began to go out of use, various kinds of readers and spelling-books were brought over from England. Still later, text-books on grammar, geography, and history were dimly foreshadowed by fragments of each, roughly "correlated" in various reading books.

In Early American Schools. — During the first half century after the War of the Revolution, the colonial course of study was enriched by the addition of grammar, geography, and, occasionally, history of the United States. Studies other than these were exceptional, save in a few cities and large towns, in which the original Latin grammar schools were becoming slowly transformed into American public schools which supplied an education in English along with instruction in Latin. The text-books were few in number and poor in quality. Noah Webster's "American Spelling Book" was used as a correlated

text-book for beginners in reading and spelling, though some schools retained Perry's or Dilworth's, both of English origin. The spelling book was followed by a single ungraded reading book, usually Murray's "English Reader," or the "American Preceptor," or Scott's "Elocution," or the "Columbian Orator," or Webster's "American Selection," or Porter's "Rhetorical Reader," or the "American First Class Book," with the Bible for supplementary reading. There was, in general, one ungraded text-book for each of the other studies; such as Pike's, or Daboll's, or Hodder's, or Welch's, or Adams's Arithmetic; Lindley Murray's or Noah Webster's English Grammar; and Dwight's, or Morse's, or Olney's, or Woodbridge's Geography. Engraved copy-books were unknown. The teacher wrote the copies at the head of each page in each pupil's blank-book, and made and mended the quill pens. Drawing was an unknown art, and little or no time was wasted in school singing. Printed courses of study had no existence. School desks and seats were rude and uncomfortable. Behind the teacher's platform there was usually found a small blackboard, but it was never used by pupils. Charts, maps, and globes had not yet come into general use. The hours of school were from 9 A. M. to 4 P. M., with an intermission of one hour at noon. Schools were in session six days in the week, though on Saturdays they closed at noon in order to give pupils time to prepare for Sunday. In summer time, when the big boys were at work on the farm, the school was taught by some young schoolmistress that had attended the academy a few terms. During the winter term of three months a school-master was employed, because some of the boys required a strong hand in discipline, and the older boys from fifteen

to twenty-one years of age took up book-keeping or pursued the advanced course in algebra and geometry found in Pike's arithmetic. The schoolmaster was paid from ten to fifteen dollars a month, exclusive of board; and the schoolmistress from three to eight dollars a month. As late as 1814, Mary Lyon, the founder of Mt. Holyoke Seminary and College taught her first district school in Western Massachusetts for \$3 a month, and "boarded round."

DISCIPLINE.

School discipline was rigid and sometimes severe, like that in the schools of England and Scotland. It was pithily summed up and kept alive by a well-known couplet in the "New England Primer:"

"The idle fool
Is whipped at school."

The schoolmasters who came over from England during the first century of colonial life were firm believers in corporal punishment as a stimulus to mental activity in memorizing hard lessons. But the severity of English discipline slowly disappeared. The ordinary school discipline, except in some of the British types of Latin grammar schools was reasonably well adapted to the existing home government and the condition of society. In the schools of which I gained a personal knowledge, either as a pupil (1835-44), or as a teacher (1848-52), corporal punishment was of rare occurrence, and then only in cases of open insubordination. Whipping a boy for not learning his lessons was unknown. The usual manner of punishment was by a few strokes on the palm of the hand with a light wood ferule. I call to mind only one instance

of punishment on an extensive scale. This was when ten big boys became so interested in skating on a neighboring mill-pond that they came into school late after the noon intermission. They stood up in line manfully and took their flogging without a whimper. But the next day they were in their seats promptly after the ringing of the bell. As for myself, I was never whipped either at school or at home. During a teaching experience of two winters in New Hampshire and two winters in a district school in Massachusetts, the list of corporal punishments began and ended with one obstreperous boy.

My friend, John Muir, the distinguished writer and scientific explorer, who began his education by six years of study in a "grammar school" in Scotland, gives me an account of the severe discipline in the Scotch schools of that period. "Any failure in Latin, or French, or grammar, or spelling, or arithmetic, was followed by a warm thrashing, which the boys took as a matter of course and seemed to be greatly benefited by it. No disgrace at that time was attached to corporal punishment; it was as hearty and natural as the weather; kept the scholars wide awake and mindful; exerted a marvelous influence on memory; and developed manly Spartan fortitude." Earl Barnes, also, takes a very charitable view of the results of corporal punishment in the English schools of to-day.

METHODS OF TEACHING.

Recitations. — In general there was very little direct oral instruction. It was the office of the teacher to keep order and hear recitations. It was the duty of pupils to memorize text-book lessons and recite them without note, comment, or question. The end aimed at was the mem-

orizing of text-book lessons. In arithmetic "sums" were worked out by rule, and this work was believed to be the highest kind of mental discipline. In the ungraded schools of that time, indeed, it was not possible for teachers to do much more than to hear recitations. Thus the text-book became all important, and almost entirely determined the mental training of pupils. The dominating influence of this method is strong in American schools even at the present time. The sharp criticisms of German educators on our undue reliance on text-book work is not undeserved.

In the district school that I attended (1835-44), as in most of the schools of that period, written arithmetic was pursued on the "individual system," each pupil attacking the subject in his own way and working as fast as he could. We worked by the rules in the book, and when we "got stuck" by some puzzling problem, went to the master or to some older boy, who showed us how to do it. More than half our entire school time was devoted to working out sums in the book. When Colburn's *Intellectual Arithmetic* appeared, we were put on regular drill work in class, much to our delight. Great stress was placed on oral spelling and oral reading, in class. We had innumerable spelling matches, and frequent evening spelling schools. Composition-writing was unknown to us. We were supposed to acquire the "art of writing the English language with propriety" by a text-book study of Orthography, Etymology, Syntax, and Prosody, without writing even a sentence.

District Schools. — These district schools, however, were often far better than their limited curriculum would seem to indicate. For a long period, the winter schools were taught by young college graduates who were enabled by

teaching to "pay their way" while studying law, medicine, or theology. These cultured young men were ready to aid ambitious and promising pupils in beginning algebra, Latin, or other advanced studies. They encouraged fore-handed farmers to send their smartest boys through the academy and to college. The village district school that I attended was taught for three successive winters by young law students, graduates of Dartmouth. It was one of these young liberals that started a class of big boys in United States history, natural philosophy, and the civil government of New Hampshire, and graciously allowed me to enter it when only ten years of age.

A PSYCHOLOGICAL VIEW.

Attempted Improvements. — There is a recent article on "attempted improvements in the course of study," from which, by the kindness of the writer, I am permitted to make a liberal quotation. The theory, practice, and results of the old school curriculum and its accompanying method are graphically summed up and set forth by Professor Paul H. Hanus, of the pedagogical department of Harvard University, as follows:¹

"Once it was assumed that all knowledge was locked up in books; at the same time it was assumed that all knowledge (book-knowledge) was power. Hence all intellectual development meant the mastery of books. 'To put a child to his book' was accordingly the phrase which described the aim and processes of elementary education. Or, in other words, the aim was to enable the child to read, write, and cipher in order that he might possess himself of the contents of books. Until a command of written and printed speech and facility in numerical operations were secured, it was assumed that nothing else could be learned.

"Not many years ago, it was still quite generally true that the ele-

¹ The *Educational Review*, December, 1896.

mentary school course of study—the pre-high school course—could be described as chiefly a course of study in the school arts, reading, writing, arithmetic, and English grammar, together with book-geography and a little United States history. It was still quite generally true that the school seemed to be divorced from life. . . .

“It was, therefore, quite generally true that the total permanent result of the first eight or nine years of the pupil's school life was the ability to read, but not the reading habit; the ability to spell and write words, but no power of expression with the pen; a varying ability to add, subtract, multiply, and divide simple numbers, integral and fractional, but much uncertainty in all other arithmetical operations; some fragmentary book-knowledge of names and places of our own country and of foreign countries; and some scrappy information relating to the history of the United States.

“A further defect of this barren elementary course of study was to create a gap between ‘the grades,’ as they were called, and the high school. The pursuit of literature, art, natural science, foreign languages, was usually rigorously excluded from ‘the grades’; and the pupil, on entering the high school, found himself face to face with a bewildering number of conceptions wholly new to him, and consequently often as uninteresting and as devoid of significance as the drill of his grammar-school period.”

MODERN IMPROVEMENTS.

The Enlarged Curriculum. — The early common-school curriculum has been enlarged from time to time during the past half century, by the addition of music, drawing, physiology and hygiene, history and literature, nature study, and the writing of English. In many city schools and in some rural schools, the course has recently been further enlarged by the addition of elementary algebra and geometry. Moreover, in many city schools, manual training has been introduced in the form of sewing, cooking, and tool-work. In many cities graded evening schools are kept open during the winter season, and in some places, as in San Francisco, such schools are continued

throughout the year, and are regularly graded. These schools include the common studies of the elementary course, and also bookkeeping, drawing, typewriting, stenography, and certain high school studies.

Nor has this general progress been limited to the elementary schools. Science and the scientific method have led to a partial reconstruction of the curriculum in high schools, normal schools, colleges, and universities.

But the greatest enrichment of the elementary courses of study consists, not so much in the addition of new subjects, as in the change from the formal, deductive, logical, philosophical method of former times to the inductive, scientific, genetic method pursued, to-day, in the best schools. Even primary-grade pupils are now led to the direct study of nature at first hand. Instruction is imparted by the voice of the earnest teacher. Pupils are introduced to suitable literature at an early age, and are led to form a taste for good and wholesome reading. The general equipment of schools with small school libraries of appropriate modern literature, for supplementary reading at home or in school, has proved one of the greatest sources of enrichment. In many cities and towns free public libraries reinforce the school libraries.

The Kindergarten. — One notable means of enriching the common-school course is the kindergarten method of training young children from four to six years of age. This has proved the possibility of beginning school education before children learn to read and write. Created by the genius of Froebel a little before the middle of this century, the kindergarten was transplanted from Germany to America in 1855. This new educational movement was taken up by charitable associations and societies, and free kindergartens were opened in various parts of

the United States for the children of the poor in great cities.

The first public-school kindergarten was established in St. Louis (1873), through the combined influence of William T. Harris, then City Superintendent of Public Schools, and Miss Susan E. Blow. In 1896 the number of public school kindergartens in St. Louis was ninety-five. Philadelphia, Boston, Chicago, Milwaukee, New York, and many other cities have made the kindergarten a part of their school system. According to the report of the Commissioner of Education (1895-96), there were in the United States 924 free public-school kindergartens, the three leading states being Massachusetts, Pennsylvania, and New York.

The kindergarten method has stimulated child study; it has simplified instruction in the lower primary grades; it has introduced a natural method of teaching young children to sing; it has proved its power in moral training. It is only a question of time when it will become a vital part of all city school systems. The German type of kindergarten is not perfect, and it has already been materially modified to meet its American environment. It will doubtless experience further changes in methods and management.

A DECADE OF CHANGE.

During the past ten years (1888-98) there has been a period of unprecedented educational activity and improvement all over the land. Marked changes in courses of study and in methods of teaching have occasioned some friction; for teachers are conservative, and require time to adapt themselves to new conditions. It has consequently become a matter of vital importance to make room for the new studies and to find time for old ones

without overtasking pupils. For the adaptation of courses of instruction has only begun, and psychological methods are in their infancy.

The comparative value of studies in the modern school curriculum, the distribution of time to each study, the best methods of grading and promoting pupils, the value of oral instruction as contrasted with the dead formalism of text-book study and memorized recitations; the fitting of grammar school work to connect with enlightened high school courses; the closer inter-relation of high schools with the varied courses in public colleges and state universities; the extent of elective studies in grammar school, high school, college, and university; — all these are now the subjects of earnest investigation by the pedagogic departments of universities, by college presidents, by normal-school principals, by school superintendents, by boards of education, by educational journals, by the literary magazines, and by thousands of thoughtful and progressive teachers of elementary schools. It may require many years of observation, experiment, and discussion before any general conclusion shall be reached. Indeed, entire agreement on this complex question may never be reached. All enlightened educators agree that Chinese uniformity is undesirable, even if it were possible. Flexible courses, adapted to varying conditions are most to be desired.

WHY PROGRESS IS SLOW.

Conservatism and Progress. — Though the development of the primitive colonial school curriculum into the highly differentiated course of instruction in the American public school system of to-day was slow for a period of two centuries, it kept even pace with the evolution of civil

government, the extension of the right of suffrage, the increase in population, the accumulation of wealth, and the industrial and commercial prosperity of our country. For under the American system of local school management, uniform development is impossible. As vestiges of the "homespun age" are still found in some rural sections of our country, so there are schools yet in existence that closely resemble those of a century ago. The subject of improvement of rural schools is still under earnest consideration by all thoughtful educators. The question of securing good public school management in great cities is one of the most difficult problems before the American people to-day.

The Law of Change. — In taking leave of the old curriculum and its antiquated pedagogical methods, we do so without regret. All enlightened educators recognize the truth that school systems and pedagogical methods must be subject to change in order to meet the successive stages in the political, social, and industrial development of a people. "Every educational system," says a modern leader of educational thought in Germany, "grows historically from the general status of science and the views of the world and life of a people and its age; consequently there is no system of education generally applicable to all ages." In a recent paper on "Scientific *vs.* Poetic Study of Education," Professor Charles De Garmo says:¹

"How can one make a scientific study of educational ends for the present age? Only, I apprehend, by applying to education the methods that have illuminated other fields of research. If every known science, natural and human, except education, has been made alive by the historical or comparative method, why should we not expect it will do as

¹ *Educational Review*, March, 1899.

much for that? Such a method would show that, despite the visions of the poets, every nation, race, or order having the power, has given a training to its youth that in its opinion best furnished the true requisites for survival. Open at any chapter in the history of civilization, and if you would understand the education of the people, study their ideals and institutions. In these you will find the key to their education. If the national purposes are simple, the education is marked by like simplicity in its aims; if the national life is complex, the same complexity is found in education. Would an American teacher study scientifically the ends for which we educate, let him study the evolution of this people. It is not an easy task, for in two hundred years we have many times repeated, in one portion and another of our vast domain, the principal stages of the more slowly developing European civilizations. The student will have to follow with fidelity the stages of our development in religion, government, and politics; he will need to follow the unfolding of our material wealth in the development of natural resources, the growth of manufacture, and the invention and perfection of wonderful instruments of transportation and communication; he will have to investigate the financial problems of universal education, the growing independence and increased public services of women. In short, to comprehend the ends of our education as they are, he will have to become a student of our civilization as it is."

We believe that the schools of to-day are better in most respects than those of the period we have had under consideration. But in contrasting the two systems we must consider each in relation to its environment. The real question which the pedagogical student should attempt to decide is whether, on the whole, the schools of to-day fit pupils for their life-work, under the social conditions of present times, better than the old-time schools fitted children for the life environments of their own time. By laws, customs, and traditions, the past holds a strong grasp on the present, and we cannot escape from it if we would. In a succeeding chapter a few special studies on primitive school text-books may be of aid in arriving at a final judgment.

CHAPTER VI

STUDIES ON COMMON-SCHOOL TEXT-BOOKS

IT is not a matter of idle curiosity that leads the student of educational history to gather up and examine primitive school text-books. In early days these text-books absolutely determined the course of study, and from them we can gain some knowledge of what school children really studied and memorized under the narrow curriculum of the common school in early times. In no other way can we ascertain the extent to which the schools of to-day are hampered by the conventional customs or traditions of the past, or how far we have succeeded in finding our better psychological or genetic methods of instruction.

TEXT-BOOKS IN READING AND SPELLING.

The early English colonists in Virginia and New England brought with them the "hornbook," the church catechisms, a few spelling books, an arithmetic, and the Bible. The settlers of New York brought with them from the Netherlands, the catechism of the Dutch Reformed Church, the Bible, and the primers of Holland, and their children were trained to read and write their mother tongue according to the spirit of the age.

In Boston and the surrounding grammar school towns, the boys, at the age of seven years, or when they could "read the English language by spelling the same,"

or the catechism, or the Psalter, were admitted to the grammar schools in which the major study was, in the beginning, Latin grammar, and the minor and incidental branches were reading, writing, and arithmetic. In the rural schools of New England the hornbook was the only school chart, and the reading books were Dilworth's or Perry's Speller—both English, or the New England Primer, or the Psalter, or the New Testament. The "Psalter" was a collection of the Psalms of David, the Proverbs of Solomon, and the Church Creed.

The English Hornbook.—This "hornbook" was a paper sheet on which were printed the alphabet in capitals and small letters, the vowels, and combinations of one vowel with one consonant; as, ab, eb, ib, ob, ub; ba, be, bi, bo, bu, by, etc. Then followed the benediction, the Lord's Prayer, and the Roman numerals. This printed paper was pasted on a piece of thin woodboard and covered by a translucent sheet of horn, held in place by a brass frame or binding. Authentic specimens of the hornbook are now rare even in England.

The New England Primer.—After the hornbook was learned, the "New England Primer" was taken up. This little book, mainly theological, incidentally educational, consisted of the "Assembly's Shorter Catechism," with various additions to adapt it for school use. It was also extensively used in families and Sunday-schools. The first edition probably appeared about 1660, as an improvement on some primer from England. One of the best-known editions is a fac simile reprint of the edition of 1777, the full title of which runs as follows: "The New England Primer improved for the more easy attaining the true reading of English, to which is added the Assembly of Divines, and Mr. Cotton's Catechism, Boston,

1777." This correlation of reading and theology affords a striking illustration of the extreme type of the educational, metaphysical, and theological formalism of that time.

The frontispiece is a full-page wood-cut of "The Honorable John Hancock, Esq., President of the American Congress." The first page contains the alphabet in capitals, small letters, and italics; the next two pages include combinations of single vowels with single consonants, as, ab, eb, ib, ob, ub; ba, be, bi, bo, bu; az, ez, iz, oz, uz; za, ze, zi, zo, zu. Following this there are three pages of words for spelling; the first lesson consisting of words of one syllable; the second, of words of two syllables; the third, of words of three syllables; and the sixth, of such words as *abomination, edification, humiliation, mor-ti-fication*.

Reading. — The following is half of the first regular lesson in reading:

" Call no ill names.	Speak the truth.
Use no ill words.	Spend your time well.
Tell no lies.	Love your school.
Hate lies.	Mind your book.
Strive to learn.	Be not a dunce."

Next there follows an illustrated alphabet, with a short couplet after each letter, each couplet having a rude wood-cut illustrating the text. The following extracts will illustrate the character of these rhymes:

A. In Adam's fall	Q. Queen Esther sues
We sin-ned all.	And saves the <i>Jews</i> .
D. The Deluge drown'd	T. Young Timothy
The Earth around.	Learnt sin to fly.
E. Elijah hid	W. Whales in the sea
By Ravens fed.	God's voice obey.

- | | |
|--|--|
| F. The judgment made
Felix afraid. | X. Xerxes did die
And so must I. |
| O. Young Obadiah,
David, Josias,
All were pious. | Z. Zaccheus he
Did climb the tree
Our Lord to see. |

In subsequent editions, these rhymed couplets were often materially changed. In one edition, I find the following substitutes for the original text :

- | | |
|---|---|
| C. The Cat doth play
And after slay. | L. The Lion bold
The Lamb doth hold. |
| D. A Dog will bite
A thief at night. | M. The Moon gives light
In time of night. |
| F. The idle Fool
Is whipped at school. | O. The royal oak it was the tree
That saved his royal majesty. |

Other Lessons. — The succeeding twenty pages of reading lessons include the following topics : An "Alphabet of Lessons for Youth," mostly composed of quotations from the Bible ; the Lord's Prayer ; the Creed ; Dr. Watts' Cradle Hymn ; Verses for Children ; "Some Proper Names of Men and Women, to teach Children to spell their Own ;" a wood-cut of "Mr. John Rogers, the first martyr in Queen Mary's reign, who was burnt at Smithfield, February 14, 1554," followed by a poem of six pages written for his children a few days before his death ; Agur's Prayer ; and "Choice Sentences," of which the following is an example : "Our weakness and inabilities break not the bond of our duties."

"The Shorter Catechism, agreed upon by the Reverend Assembly of Divines at Westminster," fills twenty-four pages of print, all of which children were expected to read, memorize, and recite. The nature of the task set before pupils will best be comprehended by a single quotation.

"Q. 16. Did all mankind fall in Adam's first transgression ?

A. The covenant being made with *Adam*, not only for himself, but for his posterity, all mankind descending from him by ordinary generation, sinned in him, and fell with him in his first transgression."

The "Assembly Catechism" is followed by another catechism of nine pages, entitled: "Spiritual Milk for American Babes, Drawn out of the Breasts of both Testaments for their Soul's Nourishment, by John Cotton." In the later editions, Cotton's Catechism was omitted. The book closes with a dialogue in verse entitled: "A Dialogue between Christ, Youth, and the Devil."

This primer for teaching reading reminds one of the Chinese primer entitled the "Three Character Classic," which consists of 178 poetical couplets in rhyme, with three words in each line. But this Chinese classic, a thousand years old, is more difficult than the New England Primer. "It is," says Professor John Fryer, of the University of California, "a most difficult and abstruse epitome of the whole circle of Chinese knowledge written in the classical or dead language, as are all Chinese school books. This is no more like the language of home, or of every-day life than Greek or Latin are like current English. When the primer is perfectly memorized, the young pupil proceeds to the Thousand Character Classic, a book compiled A.D. 550, which he also commits to memory. Besides this dreary task, he is expected to spend some time daily, as a sort of recreation, in tracing or writing characters with the Chinese brush or pencil, commencing with large ones, from one to two inches square, and decreasing to the size of the ordinary current hand. Here the poor lad only learns the form of the characters, but is not given the faintest idea of their meaning."

The young Chinese boy learned by heart from his

"Three Character Classic," and shouted aloud to his teacher, a Chinese sentence, which means in English: "Man, as to his nature, is originally virtuous." The American boy memorized from his New England Primer, the following philosophic rhyme as he learned the first letter of the alphabet: "In Adam's fall, we sin-néd all."

The Bible. — In connection with the New England Primer, the New Testament was largely used as a reading book. As an opening exercise each pupil in turn read one verse. This custom continued in use in most schools up to the middle of the nineteenth century.

At a later colonial period various English readers and spellers came gradually into use, such as the "English Reader," Perry's "Spelling Book, the Only Sure Guide to the English Tongue," and Dilworth's "Spelling Book," published about the middle of the century, which contained, in addition to columns of words, a few elementary principles of grammar.

Webster's Spelling Book. — One of the most notable of the early American school-book authors was Noah Webster, who published, in 1783, "An American Spelling Book," which soon went into general use throughout the United States. At the beginning of the nineteenth century most of the school children in our country began both reading and spelling with the use of Webster's Spelling Book.

This famous old schoolbook was developed in strict accordance with the formal scholastic logic and the orthodox pedagogical philosophy of a century ago. Like the hornbook and the primer, it begins with the alphabet and proceeds with mathematical exactness to combinations of one consonant with one vowel; next proceeds to combine three letters, then takes up words of two syllable-

bles, and so on up to *a-bom-i-na-tion* and *un-in-tel-li-gi-bil-i-ty*.

This method of developing language by syllables in general disregard of thought is best made evident by reproducing a few lessons verbatim. After two pages devoted to the alphabet in Roman letters, Italic, Old English, and script, with the numerals, the reading and spelling lessons proceed as follows :

No. 1-I.

ba	be	bi	bo	bu	by
ca	ce	ci	co	cu	cy
da	de	di	do	du	dy
fa	fe	fi	fo	fu	fy
ga	ge	gi	go	gu	gy
go on.		by me.	it is.		is he.
go in.		we go.	to me.		he is.
go up.		to us.	to be.		I am.
an ox.		do go.	on it.		on us.

No. 3-III.

is he to go.	is it by us.	we go to it.
he is to go.	it is by us.	he is by me.
am I to go.	if he is in.	so he is up.
I am to go.	go up to it.	so I am up.

No. 6-VI.

is he to do so by me.	it is to be by me.
he is to do so by me.	by me it is to be.
so I am to be in.	I am to be as he is
he is to go up by it.	he is to be as I am

No. 10-X.

pha	phe	phi	pho	phu	phy
qua	que	qui	quo	—	—
spa	spe	spi	spo	spu	spy
sta	ste	sti	sto	stu	sty
sca	sce	sci	sco	scu	scy
swa	swe	swi	swo	swu	swy

No. 11-XI.

spla	sple	spli	splu	splu	sply
spra	spre	spri	spro	spru	spry
stra	stre	stri	stro	stru	stry
shra	shre	shri	shro	shru	shry
scra	scre	scri	scro	scru	scry
scla	sclé	scli	scló	sclu	scly

No. 54, page 41, contains 78 words of three syllables, among which the following words are found: "liturgy, blasphemy, litany, betony, scammony, chancery, sorcery, orrery."

Lesson No. 63, of 39 words, contains, "disbursement, disfranchise, hydraulics, embargo."

Lesson 121 consists of 27 words of seven and eight syllables, among which are, "incompatibility, imperceptibility, irresistibility, unintelligibility, immalleability, perpendicularity, indefensibility."

In the reading lesson attached to this spelling there are eleven sentences for reading and definition, two of which run as follows: "The indivisibility of matter is supposed to be demonstrably false." "Stones are remarkable for their immalleability."

In general, about three fourths of each page was devoted to short, disconnected sentences in reading, the other fourth to spelling. Near the end there were seven short stories and fables of from ten to twenty lines each. When pupils could read the story of "The Two Dogs," and the "Tale of the Boy that Stole Apples," they were ready to begin Webster's "American Selection" or the "English Reader."

The Little Reader's Assistant. — There lies on my table a very rare old book entitled: "The Little Reader's Assistant, by Noah Webster; Northampton, 1791. Third

Edition." The author says in the preface: "The compiler of this work has been repeatedly requested by the instructors of schools to publish a small book containing familiar stories in plain language for the benefit of children when they first begin to read without spelling."

The table of contents of this primitive first reader is as follows:

- "I. A number of stories mostly taken from the history of America, and adorned with cuts.
 - II. Rudiments of English Grammar.
 - III. A Federal Catechism, being a short and easy explanation of the Constitution of the United States of America.
 - IV. General Principles of Government and Commerce.
 - V. The Farmer's Catechism, containing plain rules of husbandry.
- All adapted to the capacities of children."*

"The Little Reader's Assistant" is a book of 136 pages, 48 pages being given to reading; 51 to grammar; 16 to the Constitution; 8 to principles of government and commerce; 8 to the Farmer's Catechism, and 3 to Reform in Spelling. It is interesting as one of the first rough attempts in this country at a "correlation of studies." It is rudely bound in the thin wood covers of that period. The history stories would delight the Herbarians of the present day. Some of these are as follows: "Columbus; Capt. John Smith; First Settlers of New England; Pequod War; Philip's War; Story of the Taking of Dover; Burning of Schenectady; Speech of Logan; Putnam and the Wolf; Putnam a Prisoner," etc.

The "Rudiments of Grammar" is a simple presentation of the subject to beginners. Noah Webster was a reformer, and he boldly cut loose from some of the ancient forms of the Latin grammar. He was half a century ahead of his times. The "Federal Catechism" is a clear

statement of the Civil Government of the United States. "The Farmer's Catechism" is probably the first attempt made in this country to introduce the teaching of agriculture into the common schools. It doubtless was satisfactory to the hard-fisted farmers of that period. It begins as follows:

Q. What is the best business a man can do?

A. Tilling the ground, or farming.

Q. Why is farming the best business?

A. Because it is the most necessary, the most healthy, the most innocent, and most agreeable employment of men.

Q. Why is farming the most *innocent* employment?

A. Because farmers have fewer temptations to be wicked than other men. . . . They have but little dealings with others, so that they have fewer opportunities to cheat than other men.

Q. What is the great art of cultivating land to advantage?

A. It consists in raising the greatest quantity of produce on the smallest quantity of land with the least expense and labor," etc.

Murray's English Reader — The title of this notable school book runs as follows: "Murray's English Reader, or pieces in prose and poetry selected from the best writers, designed to assist young persons to read with propriety and effect; to improve their language and sentiments, and to inculcate some of the most important principles of piety and virtue," etc.

The first lessons, headed "Select Sentences and Paragraphs," were made up of philosophical aphorisms like the following: "Diligence, industry, and proper improvement of time are material duties of the young."

"Virtuous youth gradually brings forward accomplished and flourishing manhood."

"Whatever useful or engaging endowments we possess, virtue is requisite, in order to their shining with proper lustre." "Society, when formed, requires distinctions of property, diversity of conditions, subordination of ranks, and a multiplicity of occupations, in order to advance the general good."

The titles of a few selections will show their didactic, abstract, and metaphysical character: "The Vanity of Wealth;" "The Trials of

Virtue;" "Reflections on a Future State from a View of Winter;" "Change of External Condition Often Adverse to Virtue;" "The Good Man's Comfort in Affliction;" "The Pleasures of Virtuous Sensibility;" "The Pleasures of Retirement;" etc.

The American Selection.—"The American Selection" was a reading book published by Noah Webster (1785). In his preface the author says: "I consider it a capital fault in all our schools, that the books generally used contain subjects wholly uninteresting to our youth. In the choice of pieces, I have been attentive to the political interests of America." We find the subject matter of this American reader superior to the metaphysical abstractions and philosophical essays of the English Reader. In the table of contents there are numerous historical pieces, such as: Washington's Resignation; Sketch of the Late War (14 pages); Captivity of Mrs. Howe, etc.; patriotic selections, such as Warren's Oration on the Boston Massacre; State papers, such as, Declaration of the American Congress, July 6, 1775; an Oration by Joel Barlow, July 4, 1787. There are several geographical sketches, numerous extracts from Shakespeare, a number of humorous dialogues, and a few rules and directions for reading and speaking.

Modern Reading Books.—About the middle of the century there were published a number of graded readers to meet the needs of graded schools, among which McGuffey's series was one of the most popular. For a long period these readers were extensively used in the Western and Southern States, and, in a revised form, they are still in use. Another well-known series was that of Salem Town.

A marked departure from the purely literary "scrap-book" style of readers was the series by Marcius Willson, in which the author correlated nature studies with reading. These readers were the forerunners of the numerous illustrated supplementary readers and nature stories that have enriched the course in reading during the last decade. Ten years later there appeared Appleton's Readers, edited by William T. Harris, characterized by their high literary

standard. These were followed a little later by Swinton's series of readers and supplementary readers, which combined literature with nature stories. Baldwin's *School Reading by Grades* (1897), consists of a series of eight carefully-graded books, each book being adapted to the work of a single school year. This excellent series is typical of the most recent form of numerous school reading books.

The Modern Method. — There has been, during the last decade, a great enrichment of the course in reading, through the introduction of supplementary reading books and leaflets of good literature. In the primary grades the fairy tales of Hans Andersen, and of Grimm, stories, myths, and fables, put into plain language, open a new world of delight to children and stimulate them to read for the pleasure of reading. Beautifully illustrated nature stories are of unfailing interest, while for the higher grades, the subject-matter is drawn from history, literature, and science.

SCHOOL ARITHMETICS.

In the beginning of colonial times, primitive ordinances required only reading, writing, and the catechism to be taught in common schools. But in most schools some instruction was given in arithmetic to the extent of the "four rules," and even of "vulgar fractions," and "the rule of three." George H. Martin says: "In 1789, no knowledge even of common arithmetic was required for admission to Harvard, nor was the candidate required to know anything of geography. But in 1814 the college called for arithmetic to the rule of three, and announced that after 1815 it would also demand a knowledge of

ancient and modern geography. In 1816 it asked for the whole of the arithmetic. Yale, too, enlarged its requirements about the same time."

English Books. — The earliest text-books used by the colonial schoolmasters were brought over from England, though afterwards reprinted in the colonies. One of the most popular of these was "Hodder's Arithmetic, or, That Necessary Art Made Easy," which passed through many editions before 1719. There was another famous English text-book (1688), the full title of which ran as follows: "Cocker's Arithmetick, Being a plain and familiar Method, suitable to the meanest capacity, for the full understanding of that incomparable Art, as it is now taught in City and Country, Composed by Edward Cocker, late Practitioner in the Arts of Writing, Arithmetic, and Engraving (1688)." Later there came Thomas Dilworth's "Schoolmaster's Assistant."

American Books. — "The earliest arithmetic written and printed in America," says Professor Cajori, in his "History of Mathematics," "appeared anonymously in Boston, in 1729." This book had only a limited sale. But at length there was published (1788) an American text-book entitled, "A New and Complete System of Arithmetic, composed for the use of citizens of the United States, by Nicholas Pike, A. M., Newburyport, Mass., 1788." This bulky volume of 512 pages contained over 300 rules. Everything was done by rule. The author everywhere adheres strictly to the time-honored "logical" method of rule, example, problems, or exercises. At the time of its publication there were in use in the United States nine different kinds of currency, and the various problems given under the head of business exchange required fifty-eight specific rules. There were many pages

of exercises in "English Money," but only two pages were devoted to "Federal Money." These two pages had become necessary because Congress had adopted (1786) the decimal currency of the United States. Jefferson desired to extend the decimal system to weights and measures, but this radical reform was rejected.

This new American schoolbook constituted a tough piece of resistance for the big boys, who frequently attended the winter school until they were twenty-one years of age. It kept them busy for winter after winter, and few there were that ever got to the end of it. It contained a full treatment of Permutation, Progression, Alligation, Single Position, Double Position, and many other barbarisms which are now, fortunately for the children, eliminated from school text-books. The advanced problems, or "sums," as they were then called, related to the mechanical powers, gravity, the calculation of the age of the moon, and the time of high and low tides. It dominated the type of succeeding arithmetics for more than half a century, and its influence on the order of topics can still be perceived in many of the text-books now in use.

The order of subjects in this book makes an interesting pedagogical study for teachers. This order reads, in full, as follows: simple addition, subtraction, multiplication (40 pages); compound addition and subtraction, with tables and problems (17 pages); reduction, ascending and descending, and vulgar fractions (14 pages); decimal fractions (3 pages); Federal Money (2 pages); compound multiplication and division (12 pages); reduction of coins, (12 pages); duodecimals and single rule of three (16 pages); rule of three in vulgar fractions and decimals (8 pages); rule of three inverse (3 pages); compound proportion (5 pages); conjoined proportion (7 pages); single fellowship and double fellowship (8 pages); practice (i.e., business calculations in all sorts of problems in

all kinds of currency (29 pages); tare and trett, extraction of square root, cube root, bi-quadrate root, sur-solid root, and roots by approximation, — in all (24 pages); arithmetical progression and geometrical progression (32 pages); simple interest and interest by decimals (14 pages); annuities, discount, discount by decimals (17 pages); barter, loss and gain, equation of payments, brokerage, policies of insurance, compound interest, compound interest by decimals, discount by compound interest, annuities or pensions in arrears at compound interest, present worth, or annuities at compound interest, annuities, etc., in reversion, and purchasing annuities forever, — in all (53 pages); circulating decimals (6 pages); alligation alternate (5 pages); single position and double position (5 pages); permutations and combinations (6 pages); "Miscellaneous Questions, with the Method of Solution," including problems of all kinds in physics, relating to the mechanical powers, specific gravity, the tides, astronomy, etc. (31 pages); tables of exchange (16 pages); chronological problems (14 pages); use of logarithms (2 pages); "plane trigonometry" (16 pages); mensuration of superficies and solids (36 pages).

The final problem at the foot of page 468 reads as follows: "31. Suppose a Ship sails from Lat. 43° North, between North and East, till her departure from the Meridian be 45 Leagues, and the sum of her distance and difference of Latitude to be 135 Leagues; I demand her distance sailed, and Latitude come to?"

Having "gone through" all the topics catalogued above, which are condensed into 468 pages, ambitious pupils met with "An introduction to Algebra, designed for the use of academies," which carried them through quadratics, thirty-two pages. The pupils who wanted still more of mathematics were next "introduced" to twelve pages on conic sections. On the whole, this was a valuable textbook for college-bred teachers, and a passable book for common-school boys and girls that never got further than the rule of three (simple proportion). There is no tradition of any prodigy in any common school that ever reached and mastered the last proposition under the head of "Section III. of the Hyperbola": Prop. 4. As the

transverse axis is to the conjugate; so the conjugate, to the latus rectum of the transverse: $AB : VY :: VY : LI$. See figure 12."

This full edition was soon followed by an abridgment in which algebra and geometry were left out. Pike's Arithmetic was followed (1800) by that of Nathan Daboll which was succeeded by Daniel Adams' Arithmetic (1811) and Oliver Welch's Arithmetic (1813). At a later period there appeared Smith's Arithmetic, Greenleaf's Arithmetic, and an innumerable company of arithmetics.

Colburn's Arithmetic. — The first radical departure from the old, formal, English type was made by Warren Colburn in his "Intellectual Arithmetic (1823). This book went at once into general use. It was characterized by George B. Emerson as "a faultless text-book." David P. Page, author of "Theory and Practice," said of it: "In three weeks I had mastered it, and I had gained in that time more knowledge of the principles of arithmetic than I had ever acquired in all my life before." This book introduced the modern inductive and analytical method of teaching mental, or intellectual, or oral arithmetic. The abuse of this book consisted in crowding it upon young and immature minds, an abuse from which I suffered to some extent when a small boy. Such questions as the following confused me at nine or ten years of age: Question "9" p. 86. "2 eighths of 72 is 3 tenths of how many fifths of 40?" Problem 183, p. 143. "A man being asked how many sheep he had, answered, that if he had as many more, $\frac{1}{2}$ as many more and $2\frac{1}{2}$ sheep, he would have 100. How many had he?"

Graded Books. — At a later period, to meet the needs of graded schools, various "three-book series" of arith

metics were published, of which the Robinson series and the Ray series are familiar types.

Reform Movements. — In consequence of the general introduction of music, drawing, literature, and elementary science into both primary and grammar school grades, and of elementary geometry and algebra into the higher grammar grades of city schools, the undue proportion of time formerly devoted to arithmetic has, within the last decade, been greatly reduced. The introduction into city schools of manual training in wood-work, cooking, and sewing is intensifying the demand for still further limitations of the time given to this study. The reform movement in the teaching of arithmetic has found aggressive leaders among university presidents, pedagogical professors, school principals, teachers, and hard-headed business men.

ENGLISH GRAMMARS.

"The Young Lady's Accidence," one of the early English grammars published in the United States (1804), seems to have been the first English grammar used in the Boston schools. It owes its title to the fact that Caleb Bingham, the author, wrote it for use in a private school for girls which he had opened in the city of Boston. Previous to this time, instruction in text-book grammar had been limited to a few pages inserted in "Dilworth's Speller."

Lindley Murray's English Grammar. — This book, first published in England (1795), was soon after republished in this country, where it immediately went into extensive use. It dominated the type of all succeeding American text-books in this school study for more than half a century. It was an Anglicized Latin grammar which applied

to the English vernacular most of the forms of the highly inflected Latin tongue. Special importance was attached to "parsing" according to Latin models, and to the correction of innumerable examples of "false syntax."

There lies before me a copy of this famous text-book, printed (1824) at Exeter, N. H. It is an octave of 334 pages, of which 28 are devoted to orthography, 95 to etymology, 87 to syntax, 32 to prosody, 17 to punctuation and capitals, and 60 pages to an "Appendix, containing rules and observations for assisting young persons to write with perspicuity and accuracy. To be studied after they have acquired a competent knowledge of English Grammar." In his preface the author says it has been his aim to make his definitions and rules "as intelligible to young minds as the nature of the subject and the difficulties attending it would admit. "From the sentiment generally admitted, that a proper selection of faulty composition is more instructive to the young grammarian than any rules and examples of propriety that can be given, the compiler has been induced to pay peculiar attention to this part of the subject; and though the instances of false grammar, under the rules of syntax, are numerous, it is hoped they will not be found too many, when their variety and usefulness are considered."

This ancient, "logical," formal, and pedantic text-book opens with the following misleading definition: "English grammar is the art of speaking and writing the English language with propriety." Then there follows a long treatise on "orthography," which is a formal dictionary disquisition of eighteen pages on the sounds of the letters. The author's treatment of etymology has been so closely followed in many American school grammars that it might pass current in the schools of to-day. Murray's twenty-two rules of syntax have been closely followed by the authors of most modern grammars.

The models of etymological and syntactical parsing, though formal and Latinized, are shorter and simpler than those given by many of his successors and imitators. The first model for "etymological parsing" is as follows:

"Virtue ennobles us." *Virtue* is a common substantive, of the neuter gender, the third person, the singular number, and in the nominative case. (Decline the noun.) *Ennobles* is a regular verb active, indicative mood, present tense, and the third person singular. (Repeat the present tense, the imperfect participle.) *Us* is a personal pronoun, of the first person plural, and in the objective case. (Decline it.)

The "specimen of syntactical parsing" runs as follows: "Vice produces misery." *Vice* is a common substantive, of the neuter gender, the third person, the singular number, and in the nominative case. *Produces* is a regular verb active, indicative mood, present tense, third person singular, agreeing with nominative, *vice*, according to Rule I. which says: (here repeat the rule.) *Misery* is a common substantive, of the neuter gender, the third person, the singular number, and the objective case, governed by the active verb, *produces*, according to Rule XI. which says," etc. There are only sixteen short sentences given for "syntactical parsing," but the models cover seven pages.

The thirty-two solid pages on "prosody" must have proved a stumbling block to the boys and girls of former times. The probability is that very few of them ever reached the 224th page of the book. The author states that the appendix on "Perspicuity and Accuracy" is quoted, in the main, from text-books on rhetoric by Blair and Campbell. The student of methods will find in Murray's Grammar the origin of much of the unprofitable and distasteful drudgery with which the school study of English grammar has been encumbered for a century, and with which, in many schools, it is still loaded down.

Webster's Grammar. — Noah Webster, one of the most notable of American text-book makers, published (1783-86), "A Grammatical Institute of the English Language," which comprised (1) "The American Spelling Book;" (2) "A Plain and Comprehensive Grammar;" (3) "The American Selection" (a school reading book). Webster's "Speller" went at once into general use in the United States, but his "Grammar" seems to have been

limited mainly to New England. In 1793 he published "The Little Reader's Assistant," which included in one small book a correlation of easy reading lessons, the rudiments of grammar, and civil government.

In his preface to the "Rudiments of Grammar, compiled at the request of the Trustees of the Grammar School at Hartford," the author remarks: "There has been a general complaint among the teachers of schools that the Second Part of the Grammatical Institute is a work too complex and difficult for young beginners in Grammar. The author is sensible of the justness of this complaint, for Grammar is a subject difficult in itself, and not easily comprehended even by adults. *It is a mistake that children ever learn their native tongue by rule; they learn it by ear and practice.* Rules are drawn from the most general and approved practice, and serve to teach young students how far their own practice in speaking agrees with the general practice of the nation, and thus enable them to correct their errors."

The original preface to Goold Brown's "First Lines in English Grammar" (1823), thirty years later, reads, in part, as follows: "The only successful method of teaching grammar, is to cause the principal definitions and rules to be committed thoroughly to memory, that they may ever afterwards be readily applied. And the pupil should be alternately exercised in learning small portions of his book, and then applying them in parsing, till the whole is rendered familiar."

A comparison of these two statements made by two eminent grammarians shows that the reign of "formal grammar" had not only continued unbroken for thirty years, but that it had also become intensified. The preface by Webster frankly stated a truth now generally accepted by teachers, while that of Brown emphasized the deadening formalism of the ancient regime.

Other Text-Books on Grammar.—In the half century succeeding the publication of Murray's Grammar, there were published in this country about two hundred different text-books on English grammar, all modeled mainly on the plan of that famous book. Among the best known of these were the grammars of Kirkham, Smith, Bullions, and Goold Brown.

Kirkham's Grammar (1823) introduced "a new systematic order of parsing." Taking the sentence, "John's hand trembles," the following is the model for parsing the word *hand*: "*Hand* is a noun, the name of a thing; common, the name of a sort or species of things; neuter gender, it denotes a thing without sex; third person, spoken of; singular number, implies but one; and in the nominative case, it is the actor and subject of the verb *trembles*, and governs it agreeably to Rule 3. The nominative case governs the verb; that is, the nominative determines the number and person of the verb. Declined: Sing. nom. hand, poss. hand's, obj. hand; plu. nom. hands, poss. hands', obj. hands." His model for parsing a verb is too long to be quoted.

Goold Brown in "Brown's Institutes" (1823), says in his preface: "In the whole range of school exercises there is none of greater importance than that of parsing; and yet, perhaps, there is none more defectively conducted. Scarcely less useful, as a means of instruction, is the practice of correcting false syntax orally, by regular and logical forms of argument; nor does this appear to have been more ably directed towards the purposes of discipline."

The author's formula for parsing a verb is found in Praxis V. as follows: Sentence—"Piety has the purest delight attending it." *Has* is an irregular active transitive verb, from *have*, *had*, *having*, *had*; found in the indicative mood, present tense, third person, and singular number.

1. A verb is a word that signifies *to be*, *to act*, or *to be acted upon*.
2. An irregular verb is a verb that does not form the preterit and the perfect participle by assuming *d* or *ed*.
3. An active transitive verb is a verb that expresses an action which has some person or thing for its object.
4. The indicative mood is that form of the verb which simply indicates or declares a thing, or asks a question.
5. The present tense is that which expresses what now exists or is taking place.
6. The third person is that which denotes the person or thing merely spoken of.
7. The singular number is that which denotes but one.

After reading a formula like this we cease to wonder that half a century ago pupils detested grammar; and

that even teachers began a general rebellion against such interminable repetitions of definitions and rules.

Goold Brown's "Grammar of Grammars" (1851), a book of 1002 pages, fortunately intended for teachers and adults, not for pupils, is a remarkable compilation of examples of "false syntax" gleaned from English literature and from the authors of other school grammars. One rises from its perusal with the despairing feeling that nobody ever succeeded "in writing the English language with propriety."

Having waded through the formalism of the past, let us turn, as a pleasant relief, to trace the evolution of a more rational method of studying our mother tongue.

An Improved Grammar. — It was my good fortune in a New Hampshire village school to begin the study of grammar when ten years of age (1840) with a copy of "English Grammar on the Productive System; a method of instruction recently adopted in Germany and Switzerland, by Roswell C. Smith." The inductive method of this book was a marked improvement on the logical formalism of previous grammars. Though our teacher made no explanations, confining himself rigidly to asking the questions in the book, we had little difficulty in understanding the lessons. At the end of a year we began to "parse" in Thomson's "Seasons," which was followed by Young's "Night Thoughts." This was our introduction to English literature. But we were never required to write a composition, nor even a detached sentence. Learning to write the English language by actually trying to write it was at that time unknown in the common school. In the academy, even when pursuing a Latin course, which included, in order, a Latin Grammar and

Reader, Sallust, Cæsar, and Virgil, we were never once required to render a written translation.

Sentence Analysis.— The publication of Greene's "Analysis" (1847) marks the beginning of a revolt against the dead formalism of grammatical teaching. One sentence in the preface of this book conveys a pedagogical truth now generally recognized: "As a sentence is the expression of thought, and as the elements of a sentence are the expressions for the elements of thought, the pupil who is taught to separate a sentence into its elements *is learning to analyse thought*, and consequently *to think*."

Greene's "Analysis," a book designed for secondary schools, was soon followed by Greene's "Introduction," which was well adapted for use in elementary schools. It contained the elements of etymology and syntax, clearly stated, and provided for daily exercises in sentence-analysis and sentence-making.

This new feature of grammatical work was immediately incorporated into revised editions of other text-books on grammar; but parsing according to Latin models was retained in all its dead formalism, and thus a double burden was imposed on the school children. Sentence analysis, introduced as a reform, was soon carried to a painful extreme of complicated minuteness, and was finally made mechanical by the devices of wonderfully constructed "diagrams." But the children still failed "to write and speak the English language with propriety." The Murray type of grammars contained no suggestions whatever about the writing of compositions.

Language Lessons.— Meantime progressive teachers were beginning to train pupils to write good English by requiring them to write short compositions upon subjects suited to the age and capacity of children, and upon

IV Page

topics connected with school lessons in history, geography, and reading. This new movement in language practice was embodied in Swinton's "Language Lessons" (1874), which determined the type of numerous succeeding publications for school use.

The central idea of Swinton's Language Lessons is set forth in the author's preface as follows :

" This book is an attempt to bring the subject of language home to children at the age when knowledge is acquired in an objective way, by practice and habit, rather than by the study of rules and definitions. In pursuance of this plan, the traditional presentation of grammar in a bristling array of classifications, nomenclatures, and paradigms has been wholly discarded. The pupil is brought in contact with the living language itself ; he is made to deal with speech, to turn it over in a variety of ways, to handle sentences ; so that he is not kept back from the exercise—so profitable and interesting—of *using* language till he has mastered the anatomy of the grammarian. Whatever of technical grammar is here given is *evolved* from work previously *done* by the scholar."

Swinton's "English Grammar and Composition" (1877), for more advanced pupils, emphasized sentence building and composition writing. It boldly lopped off orthography and prosody as a part of modern grammar. The author says in his preface : " The necessity of a graduated course of training in the mother tongue, extending over some years, and beginning in practice and ending in theory, is now generally recognized and acted on . . . It is earnestly recommended that the grammar be taken in connection with the school composition, the author's ideal study being : three grammar lessons and two composition lessons a week."

SCHOOL GEOGRAPHIES.

Dwight's Geography. — During the colonial period

geography was not included by law in the common-school curriculum though sometimes taught incidentally. The full title of one of the earliest of American text-books on this subject runs as follows: "A short but comprehensive System of the Geography of the World; by way of Question and Answer. Principally designed for Children and Common Schools. By Nathaniel Dwight. Boston, 1801." In his preface to the first edition, dated Hartford (1795), republished in the sixth edition (1801), the author says:

"During an employment of several years in school keeping I observed that the science of Geography was but little attended to in the early days of childhood. . . . The expense of this book is so small that it may be easily afforded, and the form of a catechism admits of its being made more comprehensive, and more easily understood by children, than any of the small geographies, which have heretofore been designed for them. It will enable them usefully to improve many hours of their early years, which, for want of something of this kind, are entirely lost."

Dwight's geography is a well-printed volume of 212 pages, bound in the old-fashioned thin wood covers. It is descriptive text exclusively, containing neither maps nor wood-cuts, and no reference is made to an atlas. It opens with five pages of definitions relating to the natural divisions of land and water, to latitude, longitude, mathematical geography, and forms of government. The following extracts from a general description of New England illustrate the manner of treatment:

"Q. What are the general characteristics of the people of New England?

A. They are an industrious and orderly people, economical in their livings, and frugal in their expenses. . . . They are plain and simple in their manners, and, on the whole, they form perhaps the most pleasing and happy society in the world."

"Q. What are their diversions?

A. Dancing is a favorite one of both sexes. Sleigh-riding in winter, skating, playing ball (of which there are several different games), gunning and fishing, are the principal; gambling and horse-jockeying are practiced by none but worthless people, who are despised by all persons of respectability and considered as nuisances in society."

"Q. What is the state of science in New England?

A. It is greatly cultivated, and more generally diffused among the inhabitants than in any other part of the world. Every town has or ought to have a school in it, where the children are early taught reading, writing, and arithmetic."

Morse's Geography. — Jedidiah Morse, D.D., the father of Professor S. F. B. Morse who invented the electric telegraph, was the author of one of our first school-books. The preface to the first edition, dated New Haven, 1789, is interesting reading, not only for the light it throws on the state of education, but for its illustration of the pride of American citizenship in the new-born republic:

"There is no science better adapted to the capacities of youth, and more apt to cultivate their attention, than Geography. An acquaintance with this science, more than with any other, satisfies that pertinent curiosity, which is the predominating feature of the youthful mind. It is to be lamented that this part of education has been so long neglected in America. Our young men, universally, have been much better acquainted with the geography of Europe and Asia, than with that of their own State and country. The want of suitable books has been the cause, we hope the sole cause, of this shameful defect in our education. Until within a few years, we have seldom pretended to write, and hardly to think for ourselves. We have humbly received from Great Britain our laws, our manners, our books, and our modes of thinking; and our youth have been educated rather as the subjects of the British king, than as the citizens of a free and independent nation. But the scene is now changed. The revolution has been favorable to science in general; particularly to that of the geography of our own country. In the following pages, the Author has endeavored to bring this valuable branch of knowledge home to common schools

and to the cottage fireside by comprising, in a small and cheap volume, the most entertaining and interesting part of his American Universal Geography."

In 1812 there was published a revised edition, the full title of which reads as follows: "Geography made easy: being an Abridgment of the American Universal Geography. To which are prefixed Elements of Geography. For the use of Schools and Academies in the United States of America. By Jedidiah Morse, D.D., author of the American Universal Geography, and the American Gazetteer. 'There is not a son or daughter of Adam, but has some concern both in Geography and Astronomy.'—Dr. Watts. Illustrated with a Map of the World, and a Map of North America. Fifteenth Edition, and third of this new abridgment."

This well-written book of 360 pages octavo, opens with 20 pages devoted to the history of geography and astronomy, and to a full description of the solar system, followed by 20 pages on physical geography. Then there are 180 pages given to North America and "Independent America, or the United States." The remainder of the book treats of the rest of the world. The author's remarks on the condition of education in the United States (1810-12) are of special interest to the student of educational history, and we quote as follows:

"State of Literature.—There are in the United States (1810) thirty colleges; three or four of them, however, exist only on paper; and upwards of eighty academies. A plan is now forming under the auspices of Congress, for establishing a National University at the seat of Government."

Massachusetts.—"In Boston there are seven public schools, viz.: one Latin grammar school, three English grammar schools, and three for writing and arithmetic, supported wholly at the expense of the town; in these schools, the children of every class of citizens (the black excepted) freely associate. Next to these in importance, are the academies, of which there are about 20 in the State. In these the sciences are taught, and youth fitted for the university. Harvard University, at Cambridge, with respect to its library, philosophical appa-

ratus, and professorship, is the first literary institution in the United States."

Connecticut. — "In no part of the world is the education of all ranks of people more attended to than in Connecticut. Yale College was established in 1701. The students are divided into four classes. Their number in 1810 was 255."

Rhode Island. — "The literature of this State is confined principally to the towns of Providence and Newport. No provision is made by law for the establishment of town schools."

New York. — "Dutch schools are now discontinued and the language will probably soon cease to be used. There are twelve or fourteen incorporated academies in the State, and two colleges. Columbia College, in the city of New York, is in a flourishing state, and has more than 100 scholars, besides medical students. Union College, in Schenectady, though an infant institution, is deservedly celebrated. The annual expense of board, tuition, etc., is less than \$100. New York City contained in 1810, 93,914 inhabitants."

Pennsylvania. — "There are many private schools in different parts of the State; and to promote the education of poor children, the legislature has appropriated a large tract of land for the establishment of free schools. A seminary is established at Philadelphia by the name of The University of Pennsylvania. This State contained in 1810, 810,091 inhabitants."

Virginia. — "There are three colleges, William and Mary, Hampden-Sidney, and Washington. There are also several academies, one at Alexandria, one at Norfolk, one at Hanover, and others in other places."

Modern Books. — During the first half of the nineteenth century Woodbridge's, Olney's, Smith's, and Mitchell's geographies came into use at successive periods. They were large books, crowded with formal descriptive text and crammed with thousands of map questions the answers to which had to be hunted out in a large separate "atlas" which accompanied them. At a later period there came into use the "three book series," Primary, Intermediate, and Grammar School, such as Cornell's, Montith's, Guyot's, and some others, with text and maps in

each book of each series. A marked innovation on the old-style text-books is found in the Guyot series which made prominent the study of physical geography.

The three-book series having been found too burdensome for pupils, the latest geographies consist of only two books, Primary and Grammar School. The modern psychological and pedagogical method of teaching geography, so far as it is embodied in text-books, is to be found in Redway and Hinman's Natural Series (1898), comprising two books,—"The Natural Elementary Geography," and "The Natural Advanced Geography,"—both of which will be welcomed by teachers that are in sympathy with the modern movement to simplify the teaching of geography and bring it into harmony with the modern course in nature study.

EARLY BOOKS ON PEDAGOGICS.

The first notable book on common school pedagogics published in New England (1829), was written by Rev. Samuel R. Hall, and was entitled "Lectures on School Keeping." The author had taught in district schools when he was studying for the ministry; he had also organized the first private normal school in New England, consequently he knew something about his subject. This unpretentious little volume, being a practical book, went at once into extensive use in New England and New York.

A few years later there appeared several small treatises such as, "The Teacher," by Jacob Abbott; "Suggestions on Education," by Catherine E. Beecher; "The Teacher Taught," by Emerson Davis; and "The Teacher's Manual," by Thomas H. Palmer.

"The School and the Schoolmaster" was a pedagogical volume of 552 pages published by Harper and Brothers, 1842. Part I., "The School," by Professor Alonzo Potter, of Union College, N. Y., treated of general education, the existing condition of common schools and the means of improving them; of the duties of parents, trustees and inspectors; and of the need of a state normal school. It was ably written and is still of interest to the educational student. Part II., "The Schoolmaster," by George B. Emerson, of Boston, President of the American Institute of Instruction, treated of "the proper character, studies, and duties of the teacher, with the best methods for the government and instruction of common schools." George B. Emerson, was one of the foremost practical teachers in New England, and his part of the book is so pervaded by common-sense, it is delightful reading even now. His suggestions on oral instruction and the use of text-books, on the correlation of geography and history, on composition and grammar, and on studies in natural science, all are in accord with modern ideas. Through the liberality of some friend of common schools whose name was withheld, a copy of this book was placed in every school district in the state of New York.

This book constituted my entire pedagogical outfit when teaching my first district school.

"Theory and Practice of Teaching" (1847), by David P. Page, was an inspiring book which went at once into general use in normal schools and academies.

Wickersham's "Methods of Instruction" (1865), was a valuable educational contribution by one of the leading educators in Pennsylvania. About this time Henry Barnard published "Russell's Normal Training." Professor William Russell, graduate of Glasgow University,

and author of numerous school readers and books on elocution, was one of the pioneers in organizing private normal schools in New Hampshire and Massachusetts, and also one of the active promoters of state normal schools. He was a prominent leader in the educational life of New England, as a lecturer at Teachers' Institutes, and as a teacher of elocution, during and after the great revival inaugurated by Horace Mann. His rich scholarship, his unselfish devotion, and his noble character greatly endeared him to his pupils.

BOOKS FOR CHILDREN.

The first century of colonial life was a dismal period for children's books. Juvenile literature was limited to spelling book, primer or catechism, and the Bible. The grown-up people on the isolated farms fared little better; for books of any kind were costly and scarce. The college-bred clergyman had a small library limited to college class books and a few volumes of ponderous theology.

The one indispensable book in every family, next to the Bible and the church catechism, was the annual "almanack," which hung suspended by a string near the great open fireplace. One of the earliest publications of the solitary printing press in New England (1639) was Pierce's "Almanack, calculated for New England." In addition to the calendar of time, these early almanacs were filled up with weather predictions, old saws and maxims, and bits of theological aphorisms. They were well thumbed by all members of the family. At a later period, Benjamin's Franklin's almanac, known under the name of "Poor Richard's Almanack," circulated everywhere in all the colonies. It had a spice of humor,

and was full of wise maxims and prudent aphorisms about diligence and economy, sometimes put into rhyme. There were things that stuck like burs in the memory of young and old alike. They exerted a marked effect upon the American people, and they still hold a place in literature.

Bunyan's "Pilgrim's Progress" was reprinted in Boston (1681), and was eagerly read by the few children that could get hold of it. About the beginning of the eighteenth century a few books designed by theologians for the good of children, drifted over from England, such as, "Godly Children Their Parents' Joy," "Young People Warned," and Janeway's "Token for Children."

Cotton Mather tried his hand in making juvenile literature, and wrote a short booklet entitled, "Good Lessons for Children in Verse."¹ Mather's "Token for the Children of New England," was a reprint of an English book, with a supplement by Cotton Mather containing, "Examples of children in whom the fear of God was remarkably budding before they died." From such melancholy leaflets, even the New England Primer was a pleasant relief for children.

Then came "Robinson Crusoe" (1714), which still ranks as one of the most enchanting of all books for growing boys. Next came "Gulliver's Travels" and "The Vicar of Wakefield," and near the end of the eighteenth century several real books for little children, such as "Goody Two Shoes," "Tom Thumb," and "Mother Goose Melodies," all of which were originally published in England by John Newberry, the notable London printer.

During the Colonial period there were few newspapers,

¹ See *New England Magazine*, April 1899. Article by Charles Welsh.

and those had a limited circulation. "In 1775," says McMaster, "there were in the entire country, thirty-seven papers in circulation. Fourteen of them were in New England, four were in New York, and nine in Pennsylvania. In Virginia and North Carolina there were two each, in Georgia one, in South Carolina three." Most of these papers were weeklies. They were carefully preserved and passed from neighbor to neighbor.

Early in the nineteenth century, the two popular novels were "The Scottish Chiefs," and "Thaddeus of Warsaw." Twenty years later, Pope's "Essay on Man," Young's "Night Thoughts," and Thomson's "Seasons," were read and studied as literature, in common schools and academies. Watts on the "Improvement of the Mind," was a text-book on intellectual philosophy.

My own personal knowledge of books for children in New England began about the year 1837. My first library at that time consisted of Webster's Speller, a progressive reader, four bound volumes of "Peter Parley's Magazine," and a book of "Stories About Indian Fights." When a little older, I read and re-read two bound volumes of "The Penny Illustrated Magazine," from which I gained a pretty good knowledge of all the famous naval victories of the Americans over the British in the war of 1812. Then I plunged into "Josephus," and "Rollin's Ancient History." In my grandfather's library I discovered a large bundle of old "Almanacks," which proved a source of endless delight. My father was reading Combe's "Constitution of Man," and I read it too, though it was then held to be a dangerous book. Next I found among my father's books Pope's "Essay on Man," Pope's "Translation of the Iliad," Young's "Night Thoughts," Thomson's "Seasons," Pike's Arithmetic, and

Murray's Grammar, all of which became of more or less interest. Stowed away on a dusty shelf in the garret, I discovered "Peter Wilkins," "Gulliver's Travels," "History of the Pirates," and several other thrilling books.

The last half of the nineteenth century brought with it a juvenile literature of great variety from the pens of Hawthorne, Miss Alcott, Longfellow, Whittier, and a score of others; and this has been enriched by Grimm, Hans Andersen, Charles Dickens, and recent writers too numerous to mention.

CHAPTER VII

EDUCATIONAL OUTLOOK FOR THE TWENTIETH CENTURY

School Enrollment. — On the latest school celebration of Washington's birthday, the national flag was unfurled upon more than two hundred thousand schoolhouses, stretching from ocean to ocean. Our national songs, sung at the opening of the schools in New England, were caught up, hour after hour, with the course of the sun. It was high noon in the schools of Boston before the children in San Francisco had sung "The Star Spangled Banner," in their opening exercises. Before the waves of light, and color, and song had reached the school outposts in Alaska, the symbols of liberty and law along the Atlantic had been furled, and the schools dismissed. During this day, more than fourteen millions of public school children saluted the national flag, sung the national songs, were instructed in American history, and inspired with patriotic fervor by four hundred thousand public school teachers.

In all institutions of learning, public and private, including elementary, secondary, and higher education, there is found to be a total enrollment of 16,742,000 pupils and students. Of this vast number, about one million and a half are enrolled in private educational institutions, and over fourteen and a half millions in common schools and other public institutions of learning.

Who Control the Schools? — Under a free government, public schools represent the wants, spirit, and ideals of a

nation. As local self-government is a marked characteristic of our civil institutions, it follows that local control by district, town, city, or county, under general state law, should be a distinctive feature of our public schools. Unlike European nations, we have no centralized national system of education. We have a multiplicity of state school laws, hundreds of special provisions in city charters, hundreds of differently constituted city boards of education, thousands of town or county school officers, and tens of thousands of district school trustees. Under such decentralized control, exact uniformity of school management is impracticable and undesirable. In the words of Dr. A. D. Mayo, "the American common school is only the American people keeping school."

If we sometimes become impatient of the slow evolution of public schools, we must bear in mind that they are improved mainly by the public opinion of the communities in which they are organized. They are under the direct control of the people, and are vitalized by the industrial, political, and educational advancement of society.

In the beginning the early colonial schools, modeled after European ideals, were partly under denominational control, partly under the civil power; they were chiefly supported by tuition fees, but were sometimes maintained entirely by taxation. Under the fostering care of the people, these primitive schools have been developed into a system of free public education rising in successive stages from the kindergarten, through the primary and the grammar grades; through the high, the normal, and the polytechnic school; through the colleges of agriculture and the mechanic arts; culminating in the free state university.

The following axiomatic principles have become estab-

lished in the minds of the people, and are now generally accepted and acted upon by state governments: *First*, that it is the duty of a republican government, as an act of self-preservation, to establish and maintain a system of free public schools under the exclusive control of the civil power. *Second*, that the *property* of the state shall be taxed to educate the *children* of the state.

Simple propositions these seem to us now, but it has required two and a half centuries of experiment and struggle, and two great wars,—the Revolutionary war, and the Civil war,—to bring them into full recognition throughout all the land. The public-school system is now firmly entrenched in the revised constitutions of each and every state in the Union, is regulated by state legislative enactment, is supported, incidentally, by the interest on invested school funds, but mainly by direct state, county, city, district, and town taxation. In the older states, which have become thickly settled, the school system is developed in full. In new and sparsely settled states, if schools are still crude, and are yet in process of formation, their condition is a necessity of pioneer life.

Educational Progress. — The true economy of school management consists in the employment of professionally trained teachers. While it cannot be claimed, as yet, that we have reached the standard of fully recognizing teaching as a profession, we are steadily approximating this high ideal. The demand for professionally educated teachers is steadily growing, and the number of state and city normal schools increases year by year. Teachers' institutes and "summer schools" are everywhere established. State associations of teachers are increasing in number and strength. The National Educational Association is an acknowledged power. Educational journals

are infusing a progressive spirit into the great body of teachers. Magazines are presenting to the people the best educational thought of the country. Newspapers are spreading information on educational matters. The comparatively recent establishment of departments of pedagogics in state universities and other institutions of learning, is due to a recognition of the need of special preparation for teachers in high schools and colleges, as well as for teachers in the elementary schools.

Imperfections in the School System. — No thoughtful educator will claim that our school system is free from defects. The annual re-election or re-appointment of teachers still stands as a legal barrier against teaching as a profession. The provisions in state school laws and city ordinances, limiting the teachers' tenure of office to one year, are survivals of the age of primitive schools, when a schoolmaster was engaged to teach during the winter term of three months, and a school-mistress was employed during the summer term. A short term of appointment was then a necessity. In early days, the terms of most civil offices were limited to one year; but there is now a general tendency to lengthen them, and it is to be hoped that this reform will soon reach the school departments of cities and towns. There are already a few cities in which, by ordinance, the tenure of a teacher's position holds during good behavior. But in many of the large cities in which boards of education are elected by direct popular vote, the power of political bosses and ward politicians to order the appointment or dismissal of teachers, is a menace, not only to teachers, but to public school systems of great cities.

Another serious defect is the over-crowded condition of schools in cities of rapid growth, where from fifty to sixty

pupils, and sometimes even more, are forced upon each teacher in a classroom. Under such circumstances, pupils may learn to read and write and cipher, but even the best of teachers cannot train them in accordance with modern pedagogical methods.

Notwithstanding some weak points, however, our free-school system is broader and better than any other ever organized in the history of the human race. The kind and quality of instruction will be changed to meet new conditions, but there is no danger that the extent of education will be curtailed. When times are hard or taxes high, the schools, like other departments of government, are subjected to a running fire of criticism all along the line; but only timid and despairing souls will be frightened into the belief that the foundations of society are breaking up on account of over education. No prophets of evil can convince the American people that vice, crime, idleness, poverty, and social discontent are the results of free public schools. On the contrary, there is an abiding conviction that it is only by means of general education brought within the reach of all classes that a people can permanently maintain free institutions. The idea of universal education has fairly entered into the minds of men.

True Economy. — Liberality in taxation for public schools is believed to be enlightened economy for the state. What might be extravagance in the individual is a wise expenditure by the nation. This generation is not living for itself alone, but for future generations and the glory of the republic. Complaints about school taxation have been heard ever since the first town tax was levied in New England or New York. There are always some taxpayers who seem to consider that the chief end of man is to escape taxation. But public schools are worth far more

than they cost ; for they make intelligent the great mass of electors whose will, expressed by the ballot, makes or unmakes constitutions, and enacts laws that make or mar the common weal.

The better the schools are made, the more costly they become. The era of liberal appropriations for common schools, public colleges, and free state universities, is only beginning ; for a modern scientific and literary education, however costly it may be, is a good permanent investment. Now that a free education from kindergarten to university has been brought within the possible reach of all classes, we need not fear that intelligent electors will surrender the power of voting all the money needed for maintaining the American system of free public education.

The Outlook. — As the nineteenth century draws to a close, the educational outlook is full of promise. The common schools, with an enlarged and an enriched course of study, fairly meet the needs of the common pursuits of life ; state normal schools are everywhere training teachers for their work ; the secondary schools are extending the culture of the elementary schools and are fitting students for college ; while the free state universities and colleges of agriculture and the mechanic arts, constitute the crowning glory of the system. Freed from the scholastic trammels of the ancient curriculum, these new universities and colleges are training skilled specialists in agriculture, the mechanic arts, and other industrial, commercial, scientific, and educational pursuits, but in nowise neglecting classical courses and the professions of law and medicine. They are reacting powerfully on high schools, normal schools, and common schools, raising the standard of all, and bringing the entire system into harmony.

The corner stones of our public-school system have been securely laid and they will long endure. When we consider how the common schools have reached every state, city, village, hamlet, and rural district in our country, how they have molded successive generations into American citizens who have met the demands of every crisis in our national affairs, we pay little heed to the lamentations of pessimists. We exult, rather, that we have lived to behold the glory and grandeur of our reunited country, and rejoice that our lot is cast among a people whose faith grows firmer and stronger in republican institutions, free labor, free schools, free speech, and a free press. The words of the prophet-poet Whittier have become true:

"The mighty West shall bless the East, and sea shall answer sea,
And mountain unto mountain call: Praise God for we are free."

On the threshold of the twentieth century, as the consolidated republic is entering on a new era of prosperity and power, let us, each and all, do our utmost to hold our public schools up to their highest degree of efficiency, so that they may meet all future needs of the new nation. If our public schools are kept vitalized by enlightened common sense, patriotism, and righteousness, universal suffrage will not prove a failure, and universal education will prove the safeguard of the republic.

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PART II

APPLIED PEDAGOGICS IN AMERICAN PUBLIC SCHOOLS

CHAPTER I

MANAGEMENT IN SCHOOL GOVERNMENT

THE foundation of a school, as of society, is law and order. Teachers must possess the power of enforcing such regulations as are essential to the existence of the school as a social organization. In school government much depends on making pupils feel that rules and regulations are intended for their own good, not that they are made by the teacher for his own pleasure in exercising arbitrary power. Most pupils really prefer order to disorder, firmness to weakness, law to lawlessness. Hence calisthenics and military precision in marching are efficient aids in securing prompt obedience to commands. One object of discipline is to secure a sufficient degree of order, quietness, and regularity to enable pupils to pursue their studies and recite their lessons without interruption; but the higher aim is to train the will, and incite pupils to put forth vigorous efforts for self-control. But upon untrained children whose impulses are strong and whose habits of self-control are weak, the hand of power must be laid, to remind them of duty and compel them to do it.

Firmness. — The power to govern well is an essential quality of every successful teacher. When a new teacher takes charge of a school or a class, there is always a trial of strength between the ruler and the ruled; and woe be to that man or woman who falls a weak prey to young and merciless school tyrants. At present, in school as in state, judicious severity is, in the end, the truest kindness. Fear of punishment is the only check to the lawlessness of some children as well as of some men. The penalties of crime awarded by the law of the state, are designed, not for the average law-abiding citizen, but for the exceptional offender; and punishment in school is held as a terror only over the exceptional pupil. When all children are well governed at home, when all teachers are professionally trained, when all parents are reasonable, when hereditary tendencies are in harmony with existing social conditions, all kinds of penalties in school may safely be abolished.

But one of the main objects of the teacher should be to lead pupils to do right from a sense of duty and self-respect rather than from fear of punishment. As the school is a small social community, its members should be so trained in their duties to one another that they will learn to respect the rights of others.

School Opinion. — The public opinion of the school is an important element in discipline, and the teacher with tact will direct this power to the side of order and right-doing. Many a boy is influenced by the opinions of his fellows more than by the decisions of his teachers. Few pupils can resist when they find themselves condemned by the common voice of their companions, whose censure they dread more than that of their superiors. A wise teacher can win to his side the active, energetic,

leading pupils by putting them into places of honor, trust, or duty; and, having done this, it is easy to secure their co-operation in establishing a wholesome and restraining school influence.

Obstinate Children. — It is not good policy to drive strong-willed children into obstinacy. Respect the personality and individuality of every pupil. Indeed, make every effort to develop positive force of character. The more will of the right kind in a child the better. By a little patience and forbearance, you may bring to bear on the self-willed child the influence of kindness, sympathy, or reason. Set your own tact against the dull, brutish obstinacy of the pupil. A forced submission often ends in sullen doggedness or a smoldering fire of rebellion. The child must learn obedience; *that* is the first and greatest of lessons, but with some impulsive children real affection for the teacher will often secure obedience when nothing else will avail.

Penalties. — In order to enforce good government in schools, there must be penalties for violations of rules. These penalties may be reprimands, checks, loss of privileges, detention, suspension, or possibly in extreme cases, corporal punishment. Penalties must be *certain*, and must appear as the natural consequence of wrong acts. The child should know *what* he has to expect, and *when* to expect it. The child soon learns to yield to the inevitable. It is the *certainly*, not the *severity*, of punishment that deters pupils from violating regulations. But it is not wise to make cast-iron rules with unchangeable penalties. If you fail to enforce fixed penalties, you lose the respect of your pupils; and if you do enforce them, you may often be guilty of injustice. Give your verdict and pass sentence after the conviction of the offender.

President Eliot, in the "Unity of Educational Reform,"¹ remarks : " Down to times quite within my memory, the method of discipline, both in school and college, was extremely simple ; for it relied chiefly, first, on a highly stimulated emulation and fear of penalty. . . It is now an accepted doctrine that the discipline of childhood should not be so different from that of adolescence as to cause at any point of the way a full stop and a fresh start. . . . Among the permanent motives which act all through life are prudence, caution, emulation, love of approbation, shame, pride, self-respect, pleasure in discovery, activity, or achievement, delight in beauty, strength, grace, and grandeur, and the love of power, and of possessions as giving power."

Liberty. — It is an essential principle of school government that every pupil be allowed the largest liberty possible without infringing on the rights, interests, duties, or convenience of others. Hence the right administration of school affairs is not always an easy task. It is easy enough to sit in judgment on the cases that are pure black or pure white, but the *gray* cases are complex, requiring the utmost caution and deliberation.

Trust. — Regard your pupils as truthful until you have positive evidence to the contrary. Children with a high sense of honor will never forgive you for doubting their word, or for making an unjust accusation. Trust your pupils if you want them to put their trust in you.

Truthfulness. — Encourage truthfulness by rewarding full and frank confession with a remission of penalties, so far as is consistent with school discipline. Undue severity excites fear, and fear seeks an easy refuge in cunning and evasion. There is a conventional sense of honor among schoolboys which binds them not to inform the teacher of the misdeeds of their fellows. They are unwise teachers who take ground against this school opinion, and endeavor, by threats of punishment, to compel

¹ "Educational Reform" (1898).

pupils to become informers. It is wisdom for teachers to use tact in so modifying the school code as to draw a line of distinction between minor matters that belong to the tattling order, and the graver offenses that concern the real welfare of the school.

Order. — It is wise to make but few rules and not to indulge in much talk about infringements of them. Put yourself in the place of your pupils. Recall your own school experiences, your hopes and fears, your impulses, your notions, and the motives that influenced you.

Professor Hinsdale, in "Studies in Education," says: "Reasonable order in the schoolroom, for the most part, must be secured indirectly; it must come as the result of keen interest in the work, and close application to it. What is sometimes called 'good order' does not always imply either interest in studies or a good school, since it may be secured by extreme repression; but interest and application are pretty certain to lead to good order. In other words, order should be largely spontaneous. In the long run, that teacher will best succeed in securing it who says little about it. Even grown persons who are consciously trying to keep still, find it difficult to do so. How hard many find it to sit for a photograph! The boy whose business it is to be quiet is likely to make a great deal of noise while about it. Moreover, a positive direction of order to keep still, given to any assemblage, tends to provoke nervous and muscular movements. Great audiences are as still as death, not when the orator is descanting on order and stillness, but when he loses himself and them in his subject. Hence attempts to secure order should not be thrust into the faces of children."

Barbarism. — It is educational barbarism to inflict personal indignities, such as pulling the hair, boxing the ears, or slapping the face. Such brutalities excite the bitterest resentment, and are seldom forgiven.

Punishment. — One of the most effective penalties is to deprive offenders of some privilege, or to cut them off from the society of schoolmates at recess or intermission.

Secure order, if possible, without corporal punishment ; but secure obedience at all hazards. For in school, as in an army, discipline is essential to existence. Corporal punishment is now generally regarded only as a final resort when all other means fail to secure obedience. In many cities *suspension* has superseded corporal punishment even as a final resort. It will be well for teachers to be guided in some measure by the public opinion of the community in which they teach.

Dr. G. Stanley Hall, the kindest and most genial of reformers, said in a recent lecture in Chicago (1889): "I believe in corporal punishment in the schools. It should not be carried to excess, but the fact that an incorrigible boy knows that the teacher may whip him is a tremendous support to the teacher."

CHAPTER II

SUGGESTIONS ON CLASS-ROOM MANAGEMENT

Cheerfulness. — Cultivate a habit of cheerfulness that shall shine out from your countenance like the light of the rising sun. "A teacher has only partially comprehended the familiar powers of his place," says Bishop Huntington, "who has left out the lessons of his own countenance. *There* is a perpetual picture which his pupils study as unconsciously as he exhibits it. His plans will miscarry if he expects a genial and nourishing session when he enters with a face blacker than the blackboard."

Scolding. — The less you threaten, the less you find fault, the less you scold, the more friends you will have among the boys and girls, and the better will be your school. Unless you wish to be hated, beware of sarcasm and ridicule. A cutting remark is never forgotten and seldom forgiven.

Courtesy. — Consent cordially and gracefully, but let your refusals be firm and absolute. Be courteous and polite; it is easier to win children by kindness than to drive them by authority.

Self-help. — Beyond imparting a small stock of specific knowledge, the chief work of the teacher is to *teach pupils the right way of finding out things for themselves*, just as little children are taught to walk in order that they may go alone. It is only the poorest teachers and the untrained ones that do all the hard work for their pupils.

Agassiz said that the worst service a teacher could render to a pupil was to give him a ready-made answer. The best teachers are those whose pupils are made daily more and more able to pursue their studies without the aid of teachers.

Praise. — Make use of the stimulus of praise; but use it sparingly, so that it may be of value when bestowed. Given with good judgment, commendation is a powerful agency, but prizes and distinctions often produce the worst effect in school. Generous emulation is good, but the selfish pride of rivalry is bad.

Manner. — In conducting a recitation, look your pupils in the eye when you question them, and make them look you in the eye when they answer. Keep your voice down to the conversational key. A quiet voice is music in the schoolroom. Lighten up your class with a pleasant countenance. The teacher who cannot occasionally join in a hearty laugh with pupils lacks one important element of power. Have something interesting to say to your pupils at every recitation. If you can keep them interested you will have but little trouble about order. Keep them on the alert by being wide-awake yourself.

Question and Answer. — In general, put questions to the whole class, in order to make every pupil *think out* the answer; then, after a pause, call upon some one pupil to give it. Seldom repeat a question. Train pupils to a habit of close attention, so that they will understand what you say the first time you say it. Give slow children time to think and speak. The readiest children are not always the soundest thinkers. The highest praise given by an English inspector to a teacher was "that he allowed his slow boys time to *wriggle out an answer*." It is a bad habit for the teacher to repeat to the class a pupil's half-

audible answer. Require every pupil to speak loud enough to be distinctly understood by every member of the class. Do not expect pupils to know as much as you do, neither consider them dull because they fail to perceive things that seem to you to be simple and easy. Keep in mind the aphorism of Arnold Tompkins: "*Teaching is the process by which one mind, from a set purpose, produces the life-unfolding process in another.*"

Explaining.—Explain when necessary, but make your pupils do a part of the talking. Your talk should consist largely of intelligent questions. Encourage pupils to ask questions, but do not answer them yourself until after you have given the class an opportunity to answer.

Good English.—Train pupils to recite in good English, but do not worry them by interruptions when they are speaking. Make a note of incorrect or inelegant expressions and have them corrected afterwards. The correct use of language is a matter of *habit* rather than a result of studying the rules of grammar. It will be one of the arduous duties of every teacher, whether in high or low grade classes, to correct inaccuracies of speech. The teacher should use plain and pure English, and require pupils to do the same. No provincialisms, no slang, no careless or slovenly pronunciation should be allowed to pass unnoticed. Questions should be direct; answers concise. But do not expect children to speak perfect English, and do not become too critical about their expressions.

Habits of Study.—The text-book is designed as an aid both to pupils and teacher; but the teacher should show pupils how to study their lessons by calling their attention to leading points, by vitalizing printed words with the living voice, and by showing children not only *what*

to study, but, also, *how* to study. It is a good plan to require short intervals of study in school hours. In graded schools at least ten minutes of the half hour allowed for recitation may often be devoted to silent study by pupils. The common practice of detaining pupils after school to study imperfectly recited lessons is unpsychological. It is a physical impossibility for a tired, hungry, impatient child to do good thinking under such conditions. "No learning," says Socrates, as translated by Roger Ascham, "ought to be learned with bondage; for bodily labors wrought by compulsion hurt not the body; but any learning learned by compulsion tarrieth not long in the mind."

Home Study. — No lessons whatever, except perhaps a reading lesson, should be assigned for home study to children below the fourth grade. In general, only lessons which require mainly an exercise of memory should be assigned for home work. Many pupils have no conveniences for writing at home, and few have a quiet room to themselves. The giving out of long and difficult problems in arithmetic to be worked at home is an unmitigated evil. The lessons most suitable for home study seem to be reading, geography, spelling, grammar, history, and observation lessons in nature study.

Mental Habits. — In whatever grades you are teaching train pupils, as far as practicable, to the habit of listening attentively to what you tell them; of giving back to you, in their own words, the substance of your instruction; of observing carefully in nature-study or science; and of recording correctly. These are important things in all grades.

"We must learn," says President Eliot in "Educational Reform" "to see straight and clear; to compare and infer; to make an accurate

record; to remember; to express our thought with precision; and to hold fast lofty ideals. . . . The child of five years should begin to think clearly and justly, and he should begin to know what love and duty mean; and the mature man of twenty-five should still be training his powers of observing, comparing, recording, and expressing. The aims and the fundamental methods at all stages of education should, therefore, be essentially the same, because the essential constituents of education are the same at all stages. The grammar-school pupil is trying to do the same kinds of things which the high-school pupil is trying to do, though, of course, with less developed powers. The high-school pupil has the same intellectual needs which the university student feels. From first to last, it is the teacher's most important function to make the pupil think accurately and express his thoughts with precision and force; and in this respect the function of the primary-school teacher is not different in essence from that of the teacher of law medicine, theology, or engineering."

Reviews. — Frequent reviews are essential to good training. However well anything is learned for the time being, it will pass into oblivion if not called up again and again. Repetition is absolutely essential to habit, skill, readiness, thoroughness, and accuracy. But reviews should not, in general, consist in the assignment of five or ten pages of the text-book for home study.

"The best form of review," says McMurry,¹ "is that which springs out of comparisons, which finds in the new lessons amplifications of old principles, which makes every lesson a review of old knowledge in the light of new experience. Incidental reviews and comparisons, by which every new topic is incorporated into the body of our previous experiences are the rational form of study. It is constantly making over, modifying, and expanding the old thought material. The stated periodical review presupposes a static condition in knowledge; such knowledge, when finally salted down, partakes of the nature of a petrifaction and lacks that fluidity and pervasiveness which make it penetrate and permeate every nook and avenue of experience."

Child Study. — Above all make a careful study of your

¹ McMurry's "Method of the Recitation" (1897).

pupils, of their personal characteristics, of their varied degrees of capacity, so that you can treat them fairly and intelligently. The best psychological methods of teaching are found out by careful study of the spontaneous activities and natural tendencies of children. "I cannot but think," says William James, "that to apperceive your pupil as a little sensitive, impulsive, associative, and reactive organism, partly fated and partly free, will lead to a better intelligence of all his ways."

Professor Earl Barnes closes an able paper on "Methods of Studying Children" with the following summary: "Undoubtedly, the best student of the natural history of child-life is he who uses all methods in due proportion. If a man goes about his daily work with his eyes and his heart open; if he lives over his own childhood's life, with an honest desire to see what kind of a child he was, and what kind of a man he is, quickening his memory with childish records and autobiography; if he studies children under carefully arranged conditions, bringing the same fair-mindedness and persistence to his work that the scientist brings to his laboratory; and if he brings all these scattered studies into their due relations, by setting them in a background of general law, based on large quantitative studies, he will accomplish all that he can reasonably hope for in these days of beginnings."

New Methods. — Stand ready to give a fair consideration to new methods in teaching, even if they differ from your preconceived ideas. "The only way in which a human being can make some approach to knowing the whole of a subject," says John Stuart Mill, "is by hearing what can be said about it by persons of every variety of opinion, and studying all modes in which it can be looked at by every character of mind. No wise man ever acquired his wisdom in any mode but this; nor is it in the nature of human intellect to become wise in any other manner."

"I have never yet seen in any college or university," says President Eliot, "a method of instruction which was too good for an elementary school or a secondary school. The alert, inspiring, winning, commanding teacher is just the same rare and admirable person in school and college. When it is a question how best to teach a given subject, the chances are that college or scientific-school teachers of that subject can help school teachers, and that school teachers can help college teachers. Moreover, it is important that each should know what the other does."¹

Individuality. — It is desirable in large schools that there should be some general unity of method, but teachers ought not to be reduced to the dead level of Chinese uniformity. The life of all good teaching is the individuality of the class teacher. Principals should allow assistants the same liberty that they ask for themselves. The general tendency of large graded schools is to weaken the individuality of both teacher and pupil. Uniformity in essentials, diversity in particulars, should be the rule. Without some degree of freedom, there can be neither interest nor enthusiasm. Slaves never become enthusiastic except in a struggle for liberty.

Grade Promotions. — A quarter of a century ago there prevailed in most of the cities of our country an epidemic of official written examinations at the end of the year, which determined the promotion of pupils from grade to grade. These examinations belonged to the class termed by Huxley "the Abomination of Desolation." The result was disastrous both to teachers and pupils. Finally, the evils of this method became unbearable, and there was a general revolt against it. The "lock-step" of graded schools was broken. In many cities, pupils are

¹ "Educational Reform" (1898).

now promoted from grade to grade, or section to section, by the school principal and the class teacher, semi-annually or annually, by class records and the judgment of teachers. In the best schools pupils are changed from section to section whenever they become fitted for it.

In an address on "Problems in Graded School Management," Dr. Emerson E. White, of Ohio, makes the following statements: "There is a growing conviction among the more intelligent observers of our graded system of schools, that there are serious defects either in the system itself or in the administration. . . . But whatever may be true of the necessity or value of test examinations, they are very generally employed in graded schools, and their character largely determines the character of school instruction. If the examination tests are narrow and technical, the instruction will be narrow and technical; if the tests run to figures, the instruction will run to figures; if the tests demand details, they will 'emphasize and make imperative all the lumber of the text-books.' . . . Instead of half-time schools, I would suggest a half-time course of study in all grades above the primary. It is not necessary to require all the pupils to take the same number of studies and advance with even step through the course. This procrustean device must be given up if the public school system is to do its full legitimate work as an agency for the education of the whole people. Instead of excluding pupils who cannot meet all the conditions of a complete and thorough course of elementary education, it must provide for such pupils the best education possible under the circumstances."¹

Written Examinations. — In all schools there must be occasional written examinations. Kept within reasonable limits, they are productive of great good, provided the questions are properly prepared. Here again I am constrained to quote the tersely put statements of President Eliot: "Tests of faithfulness and of mental condition are also necessary at stated periods; but these tests should

¹ Republished in the Report of the Commissioner of Education, Vol. 2, 1896-97.

be directed to ascertain what the pupils can do, rather than what they know. There must be examinations, anticipated and unanticipated. Let them always be conducted by the teacher, for the teacher, and as helps and guides in teaching and learning."

This question of per cent. is nowhere set forth more clearly than by Arnold Tompkins, when he says: "It must be remembered that nothing lies like figures when used to indicate mental attainments; especially so when per cents. are used as motives to study, and become an object of attainment by the teacher."

School Program. — For a full discussion of the relative time to be given to the different studies, and for the arrangement of a program, teachers are referred to the "Report of the Committee of Fifteen" (1895), and the "Report of the Committee of Twelve" (1897).

The Chief End. — Under all the mechanism of graded schools, and programs, and courses of study, teachers must not lose sight of the fact that the chief end of the school and the teacher is to bring about in some way the best possible development for each particular pupil. Now the children are variable factors. They neither look alike nor think alike. They have inherited different powers of mind and tendencies of temperament. School machinery, however elaborate and systematic, and beautiful, must not be allowed to crush out all individuality in the child. Each pupil is of more consequence than the system. Child study means a recognition of differences in pupils. In spite of numbers and automatic appliances, it is the fine art of the true teacher to kindle each little soul into high ideals with some spark of enthusiasm from her own.

CHAPTER III

RECITATIONS AND THE ART OF USING TEXT-BOOKS

Objects of the Recitation. — The objects of the recitation are to induce study, to test preparation, to awaken inquiry, to cultivate expression and attention, and to enable the teacher to give necessary explanation and instruction. But the main purpose should be, not so much "to hear the lesson," as to instruct the pupil. According to Herbart, the formal steps should be:

1. The preparation, which consists in connecting the preceding lesson with the one in hand.
2. The making clear the new material to the comprehension of the pupil.
3. The apperception or assimilation of new ideas with old ideas by association, to make sure the whole lesson is understood.

Credits and Checks. — Waste as little time as possible in keeping a daily account of recitation credits. No teacher can do his best at instructing when his attention is diverted by jotting down credits. The strong tendency in graded schools to run into excessive dependence upon questions and text-book answers springs largely from the undue importance attached to credits and rank. Many sensitive pupils are kept in a constant worry on account of "checks" in recitations. A "check" is not quite so brutal as a blow; but the depressing effect of its endless dropping is often quite as bad upon the disposition. Besides, if all the half hour of recitation is spent in putting

a question to each pupil in order to "mark" him, there is little time left for teaching. *The most vital work done in a class cannot be reduced to percentage.* Recitation records may be kept; but it is by no means desirable that every recitation should be recorded. Frequently the recitation of an assigned lesson should be brief, the principal part of the time being devoted to explanations and illustrations by the teacher.

The Oral Method. — Pupils attend school, not merely to recite, but also to be instructed and aided by the living teacher. Do not stop short with hearing a lesson; add something to it; discuss it; show its connection with preceding lessons and its relation to the next advance lesson, and thus excite some interest on the part of pupils. In doing this, there is no need of going to the extreme of not requiring pupils to recite set lessons in set terms, provided that you are satisfied that ideas are associated with the words repeated. "The older pedagogic method of learning things by rote," says Dr. William James, "and reciting them parrot-like in the schoolroom, rested on the truth that a thing merely read or heard, and never verbally reproduced, contracts the weakest possible adhesion in the mind. Verbal recitation or reproduction is thus a highly important kind of reactive behavior on our impressions, and it is to be feared that in the reaction against the old parrot recitations as the beginning and end of instruction, the extreme value of verbal recitation as an element of complete training may be nowadays too much forgotten."

Text-books. — In the primitive common school the chief duty of the pupil was to memorize text-book lessons, and the main office of the teacher was to ask the text-book questions without note, comment, or explana-

tion. While this custom has been materially modified by modern methods, undue dependence upon the text-book is still a marked characteristic of the schools in our country.

In an official report on the public-school system of the United States by a distinguished German educator, Dr. E. Schlee, who attended in an official capacity the World's Fair at Chicago and the Congress of Education, there is found the following paragraph on "Methods and Text-Books":¹

"The American method of instruction, having taken the French and English mechanical memorizing for its model, differs essentially from the German. It aims, not at comprehending and mastering a subject through understanding, but at the acquisition of a complete presentation through the memory. Consequently, instruction is defined less by the teacher than by the text-book; which is learned almost by heart. Most of the time is taken up by daily questions and answers, and marks are given for the recitation. The book contains a number of questions with answers attached for recitation. Examinations for promotion in class, as well as teachers' examinations, consist, for the most part, of a number of questions and answers, so that with diligent application and a good memory even an inferior mind can easily pass them. Be the books never so good, such instruction will hardly lead to the development of the intellect and to a free mastery of the subject. The stacks of pupils' work at the exposition in Chicago contained excellent work in geography and the natural sciences, especially physiology; the explanatory drawings were particularly good and appropriate, but the finished form and at times the almost identical wording, betrayed that they were chapters from the text-book committed to memory. American teachers are by no means ignorant of this deficiency in their method. Many objections have been urged, but the method is a natural growth of the whole school system. In cases where schools or a few teachers have adopted the German method they and their pupils appear at a disadvantage at inspections and examinations arranged according to the text-book system."

¹ Report of Commissioner of Education, 1892-93.

Use of Text-Books. — One of the things which young teachers must acquire by experience and practice is the fine art of making a wise use of school text-books by fitting the printed lessons to the minds of pupils by means of inductive development exercises and explanations. For the author of a school arithmetic, or grammar, or geography, intended for use in grades other than the primary, is subject to rigid limitations. His book must treat of the conventional topics found in other books on the same subjects, else it will be rejected by publishers and school boards. It must be limited to a certain number of pages in order to compete in price with similar books. There is no room for inductive exercises, and the author reluctantly falls back on the deductive or formal method of definition, general statement, rule, exercises, and problems. The easy inductive steps must, of necessity, be supplied by the development lessons of the teacher.

Illustration in Arithmetic. — Before me lies a copy of the *Advanced Arithmetic* (1887), officially adopted for use in the common schools of the state of California. It is edited, published, and sold by the state. In using this text-book according to the average courses of study, pupils go through "the four rules," and begin their first lessons in written common fractions, in the fifth or sixth grade. The subject is presented in a deductive manner admirably adapted to a mathematician of the old colonial type. It begins with a philosophical definition as follows: "A fraction is an indicated division. Thus, the indicated division of the remainder in division is a fraction." This is immediately followed by other definitions, such as: numerator, denominator, integer, mixed number, and improper fraction. Next, these definitions are applied in twenty-one "Exercises" in which the frac-

tions given are to be classified in columns on the slate according to the preceding definitions. The following are typical "exercises": "(6) $\frac{125}{120}, \frac{180}{125}$;" "(13) $\frac{441}{330}, \frac{330}{441}$."

Now human ingenuity could hardly devise a more un-psychological beginning. It is evident that teachers must precede this deductive treatment by a series of inductive questions, explanations, and genetic exercises, which shall prepare the minds of pupils to assimilate this crude mass of fractions with what little knowledge of real business fractions they have managed to pick up outside of school and then substitute in place of the "exercises," examples that will be in accord with both common-sense and modern psychology.

In a few lessons after this formidable introduction to fractions, in due "logical order," pupils reach a topic headed "inverting the divisor." An example is given in division of fractions, with an analytical or algebraical explanation of the reason for inverting the divisor. This brings to mind my own experience as a teacher half a century ago in a district school in New England. At the close of the winter term the examining committee made their appearance—one of them being the master of the town high school, who examined my arithmetic class of three boys by asking only one question, to wit: "Give an explanation of the reason for inverting the divisor."

This lesson on "inverting the divisor" is immediately succeeded by an appalling exercise on "complex fractions," piled up in pyramids of confusion. Is it not the imperative duty of the young teacher to cut loose from this dry, pedantic, mathematical formalism and take up the subject in some natural method of development?

Finally, the pupils reach "decimal fractions," introduced by a "diagram" and thirty-two "exercises,"

to be read and written. The following are fair samples of these exercises: "(5) 7.007; (6) .13147; (19) 171.4112; (29) 293.0293." What possible use can teachers, possessed of plain common sense, make of a text-book lesson like this for a class of beginners?

How one class encountered this formidable deductive lesson, I know from observation. On entering an evening school in San Francisco, I found an anxious-looking young lady in charge of a sixth grade class of boys. She said to me, with a weary air: "We are taking our first lessons in decimals this evening, and the boys don't seem to understand it." "What is the lesson?" I asked. She showed me the book open at the "diagram and 32 exercises" mentioned above. Taking charge of the class, I sent half the boys to the board, let the others take paper and pencil, and dictated a column of dollars and cents to be added. The work was well done because the question was a business one and these were business boys. Then I asked them such questions as the following: How many cents in a dollar? What part of a dollar is one cent?; 25 cents?; 75 cents? etc. Next they read, from the columns on the board, each item as dollars and hundredths of a dollar; then, they erased the sign of dollars, and read each item as a whole number and hundredths. Finally, with \$1.12½ cents written on the board, and a few inductive questions, the class understood the reading and writing of decimals to thousandths, and there the lesson ended.

Take still another illustration. After a year devoted to common fractions, the growing boy at last reaches on page 105 of his book, a half page on "Dollars and Cents Written Decimally," containing "16 exercises to be read," such as "\$25.50," etc. Now it was believed in colonial times that in "logical" sequence decimal fractions could not be learned until all the complications of common fractions had been mastered. Consequently, in all parts of this book previous to page 105, \$25.50 is expressed as "\$25½;" \$2.35 as "\$2¾;" \$1.75 as "\$1¾," etc. This form of expression is awkward, but it was assumed as a "logical necessity." Immediately after this half page of

dollars and cents, the pupil is confronted by a half page on "circulating decimals." What is the evident duty of the teacher? Because Nicholas Pike, a century ago, placed his two pages on "Federal Currency" in a certain place in his arithmetic, must that "logical order" remain forever unchanged? When the children in all the schools of France learn decimals and whole numbers from the beginning, and carry both along together naturally and easily, shall American boys and girls, who use the Metric System as far as currency is concerned, postpone the writing of dollars and cents until long past the middle of their school course?

Turn to Grammar. — In teaching etymology, in whatever grade the subject is begun, teachers should connect, by means of inductive exercises, whatever knowledge children have acquired in the use of their mother tongue with the new terms which are presented in the text-book lesson. For instance, before assigning a lesson on "tense," the teacher should call the attention of pupils to the fact that they have been using correctly for years, most of the verb forms to express present, past, and future time. By suitable questions, without using technical terms, pupils should be led to make up sentences to show these distinctions of time. They may then regard the assigned lesson with some little degree of interest. If pains were taken to explain the real purpose of learning the conjugation of a verb, and pupils were asked to make use of each verb-form in a full sentence for the purpose of expressing a thought, the possible use of studying "conjugation" from the book might begin to dawn upon them. In a modern text-book on my table, a lesson on "conjugation" begins with a definition of the term, followed by definitions of regular and irregular verbs, and of

the term "principal parts." Without further waste of words, the author proceeds at once to present "a conjugation of the verb *to be* auxiliary of the passive voice, and of the progressive form." This is immediately followed by a "paradigm of the regular verb: *To love*."

What course shall teachers pursue to lighten up this lesson full of terms new to pupils, and apparently entirely destitute of interest to them because of their utter inability to comprehend its use? A little preparatory thought may enable many teachers to discover some way of interesting the class. Some modern book on language lessons and grammar to which teachers can turn will present inductive approaches to this topic. Almost any way is better than the mere memorizing of the "paradigm" without perceiving its application to the use of language.

The Development Method. — "The developing plan of teaching," says McMurry, "is one radically different from the lecture and the text-book methods. The teacher who employs it lectures or tells comparatively little to her class, although it is important to remember that she does tell some things outright; neither does she allow the facts that are to be learned to be first presented through a text-book; she prefers to develop them by conversation with the pupils. . . . Conversation for the sake of developing facts should be prominent in all school instruction, and since text-books, if used to introduce the topics, would often deprive this conversation of its point, their perusal should in such cases follow rather than precede the discussion itself. One trouble with many people is that they began text-books so early in school and followed them so closely that they have never learned to distinguish their own thoughts and opinions from those of the books; in fact, they are scarcely aware that they

have opinions of their own. The present common use of text-books in school results too often in slavery to books or loss of independence in thought, rather than in a mastery of books and ability to use them properly."

But it is possible to carry the development method to extremes, and teachers must endeavor to keep an even balance of judgment. Pupils must not be left to find out everything for themselves because much effort might be wasted.

Interest and Attention.—Most of us retain pleasant memories of some gifted teacher who had the power of interesting us in our work and thus stimulating us to do our best. This power of interesting pupils in their school work is partly a gift of nature, and partly the result of skill acquired by practice in accord with the principles of educational psychology. Few teachers now rely mainly on the compulsory memorizing of text-book lessons learned without interest on the part of pupils and imperfectly comprehended, or not understood at all. The chief aim of modern teachers, whether in primary grade or grammar grade, high school or college class, is to interest pupils in the subject-matter, and so lead them to the self-development of their own powers.

As to detailed ways of interesting pupils, there are many good modern treatises on applied psychology and pedagogics to which teachers can turn for suggestions. From one of the leaders in educational psychology, Professor William James, I quote one paragraph, with the hope that teachers will seek for more from the same source:¹ "Any object not interesting in itself may become interesting through becoming associated with an

¹ *Atlantic Monthly*, April, 1889. "Talks to Teachers on Psychology."

object in which an interest already exists. The two associated objects grow, as it were, together; the interesting portion sheds its quality over the whole; and thus, things not interesting in their own right borrow an interest which becomes as real and as strong as that of any natively interesting thing. . . . From all these facts there emerges a very simple abstract program for the teacher to follow in keeping the attention of the child: *Begin with the line of his native interests, and offer him objects that have some immediate connection with these.*"

General Principles. — In the general management of the recitation the difference between the skilled teacher and the untrained teacher is constantly made apparent. The unskilled teacher assumes that children are educated mainly by what they are told, or by what they commit to memory from books. His fetich is the school text-book, and he makes his pupils bow down before it. To him the child has but one intellectual faculty, and that is memory.

Mill says, that if there is a first principle in education, it is this: "That the discipline which does good to the mind, is that in which the mind is active, not passive; the secret of developing the faculties is to give them much to do, and much inducement to do it." Tyndall says, "The exercise of the mind, like that of the body, depends for its value upon the spirit in which it is accomplished." Spencer says, "The child should be told as little as possible and induced to discover as much as possible." All modern educators agree that in every branch of study the mind should be conducted from the simple to the complex; the concrete to the abstract; the indefinite to the definite; the empirical to the rational or scientific. But the unpsychological teacher violates all these first principles. In arithmetic, he begins with definitions

and mechanical rules, and ends in puzzling problems. In grammar, he omits the actual use of language in expressing thought, and devotes his attention to the technicalities of parsing, analysis, and diagrams. In geography, he is content to have his pupils memorize names, regardless of associated ideas. In history, he strings dates, like wooden beads, upon the thread of memory. In reading, he trains pupils to call words without reference to thought. In botany, he takes books before plants, and in physics, omits experiments. In fact, he neither awakens curiosity, nor excites inquiry.

While the art of conducting the recitation must be acquired, in part, by actual practice in teaching, it is a great gain for young teachers to begin with high ideal aims, presented by masters in this art. A careful study of "The Method of the Recitation" (1897), by the two brothers, Charles A. and Frank M. McMurry, cannot fail to lead any teacher, young or old, experienced or inexperienced, into new lines of thought, which will result in higher ideals of instruction. This book is the clearest and most practical presentation of the subject that has been made, as yet, in this country. The authors make in their preface the following statements :

"The Method of the Recitation is based upon the principles of teaching which were expounded and illustrated in the works of Herbart, Rein, and Ziller. At the same time, the authors hope to have shown in the body of the work that we have to do here with principles recognized by teachers in every land, and that there is no thoughtless imitation of foreign methods and devices. While our debt to German thinkers for an organization of fundamental ideas is great, the entire discussion, as here presented, springs out of American conditions ; its illustrative materials are drawn exclusively from lessons commonly taught in our schools. In fact, the whole book, while strongly influenced by Herbart's principles, is the outgrowth of several years' continuous work with classes of children in all the grades of the common school."

CHAPTER IV

PROFESSIONAL READING AND STUDY

BEFORE teaching can take rank as a profession, teachers must command respect for their scholarship. Most teachers can make their culture liberal if they rightly use the leisure time which their occupation gives them ; and those who get out of the sphere of imitation into that of invention and discovery, will find ample scope for their powers.

Teaching as an Art. — Though the desirability of professional training in the art of teaching is now generally conceded, the greatest waste of time and money in our school system comes from the employment of untrained teachers, who, in time, learn how to teach, but who do so at the expense of their pupils. This waste will continue until there is a general recognition of the need of professionally trained teachers. There are, it is true, many men and women who make teaching their life-work ; but they have little or no legal recognition as professional teachers. No state law, as yet, requires any professional training whatever as a prerequisite for teaching, the only requirement being an examination in certain conventional branches. The legal status of the teacher is strictly in accordance with the popular fallacy that anybody who can get a certificate is fit to "keep school." Why should not a state normal school diploma be taken as *prima facie* evidence of fitness to teach? Why should not the life diploma of one state be legally recognized in other states? Is there any good and sufficient reason why each state,

or county, or city, should be hemmed in by an ancient Chinese wall of educational exclusiveness? Must all teachers, when they change their residence, be compelled to halt at every state line, or city limit, or town boundary, and submit to an examination, in order to prove that they are not educational tramps?

President Andrew S. Draper, of the State University of Illinois, tersely sums up this question as follows: ¹ "Teaching in the common schools of the country cannot be advanced to the standing of a professional employment, so as to justify its classification with the learned professions until the conditions which obtain in many of our states are materially modified. It is absurd to think of reaching that consummation so long as competency is placed in ruinous and destructive competition with incompetency, so long as the best qualifications are scarcely able to earn a living or maintain independent self-respect, while boys and girls not yet mature, physically or mentally, and older persons who are unable to succeed in other vocations are permitted to secure better pay for alleged teaching in the schools than they can obtain in any other way. . . . Without a scholarship which is at home in any intellectual center, without special training which can readily prove its utility, and force the necessity of its recognition, without public discrimination between professionals and amateurs, without an entire cessation of indiscriminate licensing, without putting the school doors in the charge of professionals, without an entire elimination of favoritism—there can be no teaching profession. If I were to withhold another word you would draw an inference which I should regret. As exacting as these conditions are, it is by no means impossible to comply with them. The signs of the times are auspicious. There is a manifest educational awakening throughout the country. If we survive twenty years we shall witness advances in learning more marked and far-reaching than the country has ever known before."

Pedagogical Reading. — Aside from some general course of literary or scientific reading, all progressive teachers will read something relating to modern educational

¹ Address before the Massachusetts State Teachers' Association, 1890.

psychology and practical pedagogics. They will subscribe for and read at least one weekly journal of education, and one educational monthly. They will read the reports of the United States Commissioner of Education, whenever they can find them in the public libraries, and other school reports whenever they can get them.

Special Studies. — The student teacher who wishes to learn something about apperception, interest, character training, the oral method, and other Herbartian doctrines of the young leaders in the valley of the Mississippi, will do well to read McMurry's *General Method*, De Garmo's *Essentials of Method*, De Garmo's *Herbart and the Herbartians*, and *The Method of the Recitation*, by Charles A. and Frank M. McMurry.

Student teachers who wish to make special studies in school management and organization will read Dr. Joseph Baldwin's *School Management and School Methods* (1897); Dr. Emerson E. White's *School Management*; *School Management*, by Arnold Tompkins (1895); or any other good book of similar scope.

On applied pedagogy they will read Colonel Parker's *Talks on Pedagogics*, Compayre's *Lectures on Teaching* (Payne), and Hinsdale's *Teaching the Language Arts*. For advanced thoughts on education in general, they will read *Educational Reform* (1898), by Charles W. Eliot, President of Harvard University. This book is made up of papers read by the author from time to time, at various kinds of educational gatherings. President Eliot has been an educational reformer for more than thirty years, and while his chief work has been done in connection with Harvard University, he has been a leader in all matters relating to elective courses of study in all kinds of schools, from primary grade to university. His book ranks as one

of the most interesting and most instructive contributions to modern educational literature. It is of special value to public school teachers, as well as to educational leaders.

On the subject of psychology there are many books. The young student may begin with one of the clearest and most comprehensible, Halleck's *Psychology and Psychic Culture* (1898), and follow up the subject by reading *Talks to Teachers on Psychology*, by Dr. William James (1899), succeeded by other books whenever they appear.

Here perhaps a thought from Professor James will prove of value to student teachers: "The art of teaching grew up in the schoolroom, out of inventiveness and sympathetic concrete observation. Even where, as in the case of Herbart, the advancer of the art was also a psychologist, the pedagogics and the psychology ran side by side, and the former was not derived in any sense from the latter. The two were congruent, but not subordinate. And so everywhere, the teaching must *agree* with the psychology, but need not necessarily be the only kind of teaching that would so agree, for many diverse methods of teaching may equally follow psychological laws. To know psychology, therefore, is absolutely no guarantee that we should be good teachers. To advance to that result we must have an additional endowment altogether, a happy tact and ingenuity to tell us what definite things to say or do. That ingenuity in meeting and pursuing the pupil, that tact for the concrete situation, though the alpha and omega of the teacher's art, are things to which psychology cannot help us in the least. . . . Divination and perception, not psychological pedagogics or strategy are the only helpers here. . . . But if the use of psychological principles be negative rather than positive, it does not follow that it may not be a great use, all the same."¹

Within the past ten years attention has been directed to a study of the child rather than to the study of metaphysics. The teacher interested in this special direction

¹ "Talks to Teachers on Psychology," by William James (1899).

will do well to read the various monographs of G. Stanley Hall, President of Clark University; the Year Books of the National Herbart Society; the leading educational journals in the United States; and *The Study of the Child* (1898), by A. R. Taylor, or any one of several other books on this subject.

For special studies in the history of education in our own country, students may begin with Martin's *Evolution of the Public School System of Massachusetts*; followed by Boone's *History of Education in the United States*, and Dr. A. D. Mayo's historical sketches of early education in the United States found in the reports of the Commissioner of Education, from 1894 to 1898.

Teachers should make a study, in detail, of the early educational history of the town, city, or state in which they are teaching school. Town histories and state histories are now available to some extent in most large libraries. These local records are of great interest and of priceless value.

After many years of absence from New England, I recently took a trip across the continent in search of early educational records not to be found in California. There in the town records and town histories, I read accounts of early settlements, primitive schools, and warfare with savages. There were the rolls of honor of volunteer soldiers in a long series of wars — King William's War, Queen Anne's War, King George's War, and the French and Indian War — with pathetic tales of the slaughter of women and children, and woful stories of captivity in Canada. There in state libraries were the Army Rolls of the Revolutionary War, the War of 1812, the Mexican War, and the great Civil War, most terrible of all. Everywhere the fervent patriotism of the people was made evident in statues, monuments, and inscriptions in honor

of heroes, soldiers, and statesmen. In every burial ground over the whole country, even in the remotest rural districts, "memorial flags" blossomed over the graves of men who had served their country in battle.

In the town histories, too, were recorded the humble beginnings of the common schools, and the names of the early teachers in common school and academy.

Returning to my western home through the great metropolitan cities of Boston, New York, Philadelphia, and Chicago, I realized that the seat of wealth, power, and empire had indeed moved westward. But I hold in living remembrance and renewed respect the sturdy pioneers of the East, who made their way against "heathen savages," established a democracy of the common people, helped to win Independence from the British, and while doing all these things, wrested an economical living from a stubborn soil, and yet found time to establish and organize a public school system that has stamped its impress on every township of American soil from the Atlantic to the Pacific.

Applied Pedagogics.—In the succeeding chapters of this book, the modern course of study in the primary and grammar grades, will be considered somewhat in detail, and generally by grades. The course, as presented, will not be an *ideal* one, possible only in small classes under the most favorable conditions as to numbers and conditions, but one which shall represent the average American school under average conditions. An attempt will be made to present condensed pedagogical directions, hints, and suggestions in accord with modern pedagogics and the principles of educational psychology, and adapted in a measure to the schools as they now exist. In accordance with this plan, the outlines of work and method will be

composite, representing the schools of no particular part of our country, but like a composite photograph, presenting the general American type. Moreover, liberal quotations will be drawn from the latest writing of American teachers, educators, and pedagogical leaders, thus presenting something of the drift of educational thought in the United States.

CHAPTER V

PEDAGOGICS APPLIED TO READING, WRITING, SPELLING, AND DRAWING, IN MODERN GRADED SCHOOLS

I. READING AND WRITING.

First Grade or Year.

THE variety and excellence of the Reading Charts and First Readers now in use, render unnecessary any specific consideration of methods of teaching beginners how to read. Most teachers begin with the word-method and, after teaching a limited number of common words in easy sentences, proceed to introduce gradually the spelling of words by letters, aided, more or less, by the phonic method. After a short preparatory training, it is a good plan for teachers to write on the blackboards short sentences, such as children use in conversation, and let pupils copy them on blackboards, paper, or slates. In this way a lively interest may be awakened.

Writing. — Writing should be carried along hand in hand with reading. Children may begin by copying on slates or paper, words or short sentences written on the blackboard by the teacher, or by copying script lessons from the First Reader. If possible, children should be allowed first to write on blackboards, and then to repeat the lessons on slates or paper. Writing with a pencil on paper is better than slate-writing, and after the first half year, the pen is better than the pencil. Encourage the crudest attempts. Show pupils how to hold pens and

pencils, and encourage them to write easily and freely. The best development lessons are: First, practice on blackboards. Second, practice on paper or slates, with the pencil. Third, practice on paper with the pen.

Spelling. — The first work in spelling should be combined with writing, by having pupils copy, first from the board and afterwards from memory, words written by the teacher. A little oral spelling may be taken at times to gain the help of the ear as well as the eye.

"All educators are now agreed," says Compayré, "that the child ought to be drilled in writing from the moment he enters school, and that he should not wait for this until he has learned to read fluently. More and more, the truth of this pedagogical maxim will be recognized, that drawing, writing, and reading, need one another and are mutually helpful."

Aim. — The aim during the first year should be to change the child's oral vocabulary into the corresponding forms of the written and printed page. When children enter school at five or six years of age, they have been learning a spoken language from the time they began to lisp the words *papa* and *mamma*, under the painstaking tuition of mothers and other members of the family. Their colloquial vocabulary is by no means a limited one. They have already learned to speak their native tongue with some degree of "propriety," though they have never heard of grammar. They have probably learned by heart many Mother Goose rhymes, and have listened to folklore stories handed down from primitive times. Their active young minds have been developed by the method of nature. The thoughtful teacher will take all this into account when she begins to teach these children to read and write the language they already know how to speak.

Stories. — As a continuation of the home method, the teacher will tell or read to the children many stories of which the following are types: The Three Bears, Cinderella, Little Red Riding Hood, Jack and the Bean Stalk, The Lion and the Mouse, The Ugly Duckling, and the Pea Blossom.

Dr. Herman T. Lukens, of Clark University, makes the following suggestions about teaching children to read: "Most children learn to read either as a matter of course, or else, if they think of it at all, the only reason they can find is because other boys are learning to read. . . . A child who does not want to learn will take from five to ten times as long to learn to read as one who is eager. To start with this live interest and eager desire is of a hundred times more importance than it is whether you use the word method or the alphabet method. The teacher ought to read a good deal of wholesome and interesting material to the pupils in the kindergarten and the primary school, and she ought to take pains to read well, with expression and appreciation. Then, in beginning, let her take some story with the substance of which the pupils are already familiar (say a fairy tale or a rhyme from Mother Goose) and use it for the first reading lesson. If this is done, the children realize what reading is, viz.: That it will enable them to get for themselves from books that sort of material. . . . When in this and other ways a good head of interest has been turned on, the second stage will be rich and abundant in eager attempts to imitate that which has aroused the activity. This is the great opportunity for suggestion and for indirect teaching, which is the best of all teaching.

Helps for Teachers. — Teachers seeking practical illustrations of the possibility of combining the teaching of reading, writing, and drawing in this grade will find them in recent publications, such as, Crosby's *Our Little Book for Little Folks*; *The Finch Primer*; Baldwin's *School Reading by Grades—First Year*; Lane's *Stories for Children*. Book I. of the *Heart of Oak Series* contains a delightful collection of Mother Goose rhymes.

Second Grade or Year.

Supplementary Reading. — After the first school year it should be the aim of teachers to secure the very best

kind of supplementary reading matter suited to the wants and needs of young children. Instead of repeated reviews of old lessons, children should have new books that will awaken fresh interest. As soon as they begin to read a story because of its interest, their rapid progress is assured, and if suitable books are placed in their hands they will read a great deal out of school. Teachers need not fear to let them read stories that contain some hard words, provided the stories are interesting. The Herbartian principle of *interest* applies in full force in teaching children to read during their first three years of school life. It will be well for the teacher to make an experiment by selecting, occasionally, an exceedingly interesting story, making a beginning of it in class, and then putting the books into the hands of the children and asking them to finish the story at their desks or at home. It is always a mistake to keep children long at work on short, easy sentences expressing only commonplace thoughts that excite no interest.

An illustration may serve to give point to this statement. I know of one little fellow who learned to read at home before he was six years old. He was not a precocious boy. His grandmother taught him his letters from nursery picture books. In some way or other, probably coached by his grandmother, he learned to read nursery rhymes. At length, in looking at the pictures in a copy of the *St. Nicholas*, he became interested in a story about the "London Cats' Meat Man." He stuck to that story for three weeks. It was full of long and hard words. He gave his grandmother, his mother, his father, and his elder sister no peace until he had read that four page story through. After he had mastered it, he read many other stories without help from any one. When six years old

he went to school and was put into the primer class. At this degradation he protested so vigorously that the thoughtful young teacher tried him successively in reading from a second reader, a third reader, and a fourth reader, and then wisely excused him from the primer class.

The following are types of a large class of supplementary books suitable for the second school year: *Easy Steps for Little Feet*; *Heart of Oak Series, Book I*; *The Hiawatha Primer*; *Baldwin's Fairy Stories and Fables*; *Baldwin's Reading by Grades, Second Year*; *Baldwin's Fifty Stories Retold*. A small set of each of these, or of similar books, varying in number, according to the size of the class, should belong to the school library. From time to time lend these books to children to read at home. If there is no school library, teachers should secure a copy of each of these books for their desks.

Spelling. — While the greater part of spelling is learned by reading and writing, oral spelling should not be entirely neglected. An occasional oral spelling exercise is a good thing to stir up a class that has become weary of writing. Give occasional exercises, both oral and written, in spelling the names of things that are good to eat; of articles of home or school use; of household words, etc. In written spelling, train pupils to write short sentences from dictation, and to copy sentences from the reading lessons.

Pupils should not be required to spell from memory all the hard words of their reading lessons, because their ability to *read* words runs far ahead of their memory to *spell* them. The words which children are most interested in spelling are the names of common objects at home or at school; names of things they eat, the names of animals, etc.

For Reference. — Teachers who may wish to get a glimpse of what is possible within the range of story-telling in first and second grades

are referred to Rice's Course of Study in History and Literature, and to McMurry's Course of Study for the Eight Grades.

Third and Fourth Grades.

For the third school year, the basis of reading should be some Second or Third Reader, to which should be added selections from suitable supplementary readers or other books of which the following are good types: Scudder's Fables and Folk Stories, Andrews' Seven Little Sisters, Heart of Oak Books, Book II., Baldwin's Reading by Grades, Baldwin's Old Stories of the East.

During the fourth school year, in addition to the regular Fourth Reader, supplementary reading may be extended, using books like the following: Hans Andersen's Stories, Robinson Crusoe, Bass's Nature Stories, Eggleston's True Stories of American Life and Adventure, Baldwin's Reading by Grades.

Fifth and Sixth Grades.

The school readers officially adopted for these grades ought to contain choice selections of good literature. For supplementary books suitable for reading at home or in school, teachers are referred to a typical list at the end of this course. In addition to school reading, strive to direct home reading. If pupils have access to a public library, suggest interesting books for them to read. If there is no library, give them the names of at least two good books that they ought to read; possibly their parents may buy them.

Seventh Grade.

In the seventh grade, begin to call the attention of pupils to the structure of sentences in their reading lessons.

Require them to point out the subjects and the predicates in sentences selected from reading lessons. The sooner children learn to apply what they have learned about the structure of the sentence to sentences as they occur in literature, the better it will be for them. Avoid complicated forms of sentence analysis, and eschew diagrams. Among the books selected for supplementary reading in school or at home, there should be at least one containing stories of American history.

Eighth or Ninth Grade.

In the highest grammar grade, take up Gray's *Elegy*, or some other suitable poem for special study of grammar as applied to literature. Begin the study of figures of speech, particularly simile, metaphor, and personification. Lead pupils to think about the real meaning of poetic forms of speech, and show them how "parsing" becomes an aid in ascertaining the meaning of long and involved sentences. The chief use of sentence analysis and parsing is to enable pupils better to comprehend the full meaning and force of literature.

Home Reading.—In the crowded program of most schools, it will not be possible to find time for enough oral reading in class to make good readers; therefore, teachers should encourage pupils to practice reading aloud at home. The standard of good reading should be:—The ability to read at sight both prose and poetry without mispronouncing common words, without stumbling or hesitation, or the repetition of words. Stage elocution is not expected.

BOOKS.

Every school library ought to contain several sets of

supplementary readers or leaflets of good literature for use in connection with the standard readers. For valuable hints in selection, teachers are referred to Rice's *Course of Study in History and Literature*, and to McMurry's *Special Method for Reading*.

Commissioner Harris says: "One great object of the school in our time is to teach the pupil how to use books — how to get out for himself what there is for him in the printed page. The man who cannot use books in our day has not learned the lesson of self-help, and the wisdom of the race is not likely to become his. He will not find, in this busy age, the people who can afford to stop and tell him by oral instruction what he ought to be able to find out for himself by the use of the library that may be within his reach. . . . The most important investigation that man ever learns to conduct is the habit of learning by industrious reading what his fellow-men have seen and thought."

Ideals. — The aim in the common schools should be to make known to pupils the proper use of books as sources of knowledge, and at the same time to inspire a love for literature which shall prove a life-long means of intellectual enjoyment and education. "Our ideal should be," says John Dewey, "that the child should have a personal interest in what is read, a personal hunger for it, and a personal power of satisfying this appetite."

"From the total training during childhood,"¹ says President Eliot, of Harvard, "there should result in the child a taste for interesting and improving reading, which should direct and inspire its subsequent intellectual life. That schooling which results in this taste for good reading, however unsystematic or eccentric the schooling may have been, has achieved a main end of elementary education; and that schooling which does not result in implanting this permanent taste has failed. Guided and animated by this impulse to acquire knowledge and exercise his imagination through reading, the individual will continue to educate himself through life. Without that deep-rooted impulsion he will soon cease to draw on the accumulated wisdom of the

¹ "Educational Reform" (1898).

past and the new resources of the present, and, as he grows older, he will live in a mental atmosphere which is always growing thinner and emptier."

Caution. — It is possible in the higher grades to crowd too much of even the best literature upon the immature minds of pupils. In the lower grades it is quite probable that some enthusiastic teachers carry reading to the extremes which have so long characterized the endless drill on arithmetic in these grades. The work should be kept within the limits of enlightened common sense. The danger line has certainly been reached in the mass of Greek and Roman and Pagan mythology which has recently been forced into the lower grades.

On this point Professor John Dewey in his trenchant paper on "The Primary Education Fetich"¹ says: "We have to take into account not simply the results produced by forcing language-work unduly, but also the defects in development due to the crowding out of other subjects. Every respectable authority insists that the period of childhood, lying between the years of four and eight or nine, is the plastic period in sense and emotional life. What are we doing to shape these capacities? What are we doing to feed this hunger? If one compares the powers and needs of the child in these directions with what is actually supplied in the regimen of the three R's, the contrast is pitiful, tragic. This epoch is also the budding-time for the formation of efficient and orderly habits on the motor side; it is pre-eminently the time when the child wishes to *do* things, and when his interest in doing can be turned to educative account. No one can clearly set before himself the vivacity and persistency of the child's motor instincts at this period, and then call to mind the continued grind of reading and writing, without feeling that the justification of our present curriculum is psychologically impossible. It is simply a superstition; it is a remnant of an outgrown period of history. All this might be true, and yet there might be no subject-matter sufficiently organized for introduction into the school curriculum, since

¹ *The Forum*, May, 1898.

this demands, above all things, a certain definiteness of presentation and of development. But we are not in this unfortunate plight. There are subjects which are as well fitted to meet the child's dominant needs as they are to prepare him for the civilization in which he has to play his part. There is art in a variety of modes—music, drawing, painting, modeling, etc. These *media* not only afford a regulated outlet in which the child may project his inner impulses and feelings in outward form, and come to consciousness of himself, but are necessities in existing social life."

Books for Supplementary Reading. — The following books are suggested for supplementary reading, but this list is subject to amendment to-morrow if better ones appear :

(**From Fourth to Seventh Grade.**) — Hawthorne's *Wonder Book* ; Hawthorne's *Tanglewood Tales* ; Swiss Family Robinson ; Robinson Crusoe ; Elliott's *Six Stories from Arabian Nights* ; Baldwin's *Story of the Golden Age* ; De Garmo's *Tales of Troy* ; Jane Andrews' *Ten Boys on the Road* ; Longfellow's *Children's Hour* ; Holmes' *Grandmother's Story of Bunker Hill Battle* ; Eggleston's *Stories of Great Americans for Little Americans* ; Baldwin's *School Reading by Grades*.

Eighth and Ninth Grades. — Longfellow's *Evangeline* ; Dickens' *Christmas Carol* ; Julius Cæsar ; *Vicar of Wakefield* ; *Merchant of Venice* ; Baldwin's *Reading by Grades—Eighth Year* ; etc.

HINTS ON CLASS MANAGEMENT IN READING.

While the leading idea throughout the whole course in teaching the art of reading should be the *thought* side, or the *quality* of the reading matter, the "mechanical-mental" side of the art must always remain an important secondary consideration. The extent of "drill work" in this direction must be determined by the skill of the teacher and the ever-varying needs of different grades. It is evident that some attention must be given to vocal training, to correct pronunciation, to emphasis, and to inflection.

Standard in Oral Reading. — Pupils should be trained

to avoid a high-pitched, thin, sharp, unnatural, school tone, as well as the other extreme of feebleness and indistinctness. It is a good standard to require each pupil, except those in the first and second grades, to read so clearly and distinctly that all the class can hear every word. The teacher should sometimes listen with her own book closed. In the lowest grades it is often a waste of effort to try to make timid children with feeble voices read loud enough to be heard by the class.

Vocal Drill. — By short and suitable concert exercises, pupils should be trained to the proper use of the lips, tongue, and teeth in distinct articulation. Occasional breathing exercises are of great value as an aid in securing an erect attitude and the free use of the vocal organs. Occasionally give a drill exercise on words containing vowel sounds, giving special attention to those sounds which children in some parts of our country are apt to give incorrectly; such as *a* in half, calf, laugh, etc.; intermediate *a*, as in ask, last, past, after, etc.; *u* after *r*, as in truth, rude, fruit, etc. The school is the proper place for correcting provincialisms in pronunciation. Explain the essential diacritical marks of the school dictionary in order that pupils may be able to find out for themselves the correct pronunciation of words. Train pupils to refer to the dictionary for definitions as well as pronunciation.

Oral Expression. — In the highest grammar grade, some special attention should be given to manner of expression. At this stage of progress the motive of the pupil should be, not merely to pronounce words correctly, not merely to comprehend the thought in what is read, but to make others clearly comprehend the thought, feeling, or emotion in what is read. Good oral reading does not necessarily involve much training in elocution. Indeed, what is

termed "stage elocution" should be avoided in school reading.

Choice Extracts. — In each grade throughout the entire course, pupils should be required to memorize a few short extracts of prose or poetry suited to their successive stages of development. The recital of such extracts should occasionally take the place of a lesson in oral reading.

Correlation. — In the higher grammar grades the reading lesson will become a correlated study of reading, language, literature, composition, and grammar, in varying degrees according to the skill of the instructor in teaching the language-arts, and according to the quality of the reading matter in use.

Thought. — On the *thought* side of reading, it is evident that for the first three or four years in school the teacher must take great pains in showing children how to get at the thought in their reading lessons, and how to study a lesson at home or in school. In the higher grades it is usually a difficult matter to lead pupils to study a reading lesson in the careful manner with which they study a lesson in arithmetic or geography. In most school readers there are some selections that may be read with little or no study; there are others that the teacher may study with the class; and, occasionally, there are some which pupils should study by themselves. It is here that the good judgment of the teacher must be her own guide, independent of hints or suggestions. It is useless, however, for any teacher to expect that all pupils can be made to comprehend, in full, everything in all the literary extracts which are read; some children will assimilate much, others but little. It will be well for every teacher to call to mind whatever she can recollect of her own school experiences when she was of the same age as her pupils.

II. MODERN WAYS OF TEACHING PENMANSHIP.

In the Beginning.—At some time during the first school year, write on the board easy words and short sentences and let pupils copy them on slate or blackboard. Little children like blackboard writing in large hand because the teacher and the class can see their work. Follow these lessons by slate-work in large, easy, running hand. Do not trouble beginners with elements, principles, or analysis, but put them at once to writing words and short sentences. In fact, as said before, reading and writing ought to be carried along together. The capital letters are no harder to make than are some of the small letters. In blackboard lessons, see that your pupils form the habit of holding a crayon properly. In slate writing, train pupils to hold their pencils as a pen is held. Occasionally give a drill exercise in making ovals, running m's, etc., in order to secure freedom of arm-movements and an easy way of holding the pencil. Of course their first attempts, like those in drawing, will be rough, crude, and irregular, as naturally they should be. Above all, no attempt should be made to force children during the first two or three years of school life into premature accuracy and finish of handwriting.

Give special attention to the manner of placing slates or paper upon the desk, and to the position of the pupil in writing. Under favorable conditions children should occasionally be allowed to use pen and paper after the first six months in school, writing in a large, free, and easy hand.

If the school desks are not too high, train children to use the forearm movement in writing with pencils. The difficulty is that many desks are so high that no arm

movement is possible, and therefore children are limited to finger movements, which are slow and labored. If you are allowed liberty to experiment, try the vertical writing now coming into extensive use. Do not sit down in a chair behind your table, as some teachers do, but go about among your pupils, place their slates or books properly, take hold of their rigid fingers, and show them how to hold a pen easily. Do not expect to secure exact uniformity in holding the pen, but make allowance for the natural tendency of the child.

Free Hand. — Train pupils from the beginning to write with a free and ready movement, instead of the slow, constrained, rigid, snail-like tracing that so often prevails in school. Do not attempt to make the older pupils write a uniform "copy-book hand," but let them form their own characteristic style. The main object is to make them write legibly, easily, and rapidly.

Standard. — The standard should be to write a legible hand fast enough for the ordinary purposes of life. There should be no attempt to teach a delicately shaded, ornamental handwriting like that of a special teacher of penmanship.

Copy Books. — The conventional method of learning to write, which prevailed until recently, involved the use of a series of graded copy books, consisting of from six to ten successive numbers. Children were required to fill out, slowly and painfully, each half year, one of these copy books, striving to imitate the elaborate, delicately-shaded and hair-line penmanship of the copy. This kind of writing was painfully slow in execution. A great deal of time was wasted in vainly trying to make all pupils learn to write a fancy style of penmanship. The introduction into the school course of written exercises in

the various school studies has already compelled, not only a reduction in the number of copy books but also a change to a simpler style of penmanship, bearing some resemblance to the business handwriting of practical life.

In many city schools engraved copy books are but little used during the first three and in the last two years of the course, thus limiting drill in copy-book lessons to the third, fourth, and fifth grades or years. In such schools, indeed, writing is mainly taught incidentally in connection with written exercises in the various school studies. The result is a saving of about one half of the conventional time generally allotted to writing.

Illustration. — As superintendent of schools in a large city, I had an opportunity of observing the result of an experiment in teaching writing in a large grammar school which included primary grades. The principal was authorized to dispense with copy books or to use them as she pleased, and to teach vertical or slant handwriting as she selected.

At the end of eight months, I visited a first grade class engaged in writing short sentences from dictation. The children were writing with lead pencils on rough, unruled paper, in an easy, flowing, legible, vertical hand. In the fifth grade, the penmanship was good enough for all practical purposes in life, and very few special lessons in penmanship were required in grades higher than this. In the whole school the transition from slant writing to vertical had been made, to the delight of the children. There had been no striving after fancy penmanship, but in good writing the school as a whole ranked among the best in the city.

Under the method pursued, there had been a great saving of time, and this extra time had been given to free-

hand drawing from objects such as leaves, plants, vines, flowers, and figure drawing. Some of the middle grade classes were skillful in the use of water colors, and all were delighted with their work. In the higher grammar grades, the written exercises in the various school studies were dispatched in half the time required in most other schools.

Psychological Principles. — In the Second Year Book of the National Herbart Society (1896), there is an exhaustive paper by Dr. H. T. Lukens, on race and individual development, illustrated by reading, writing, and drawing. In relation to writing he says :

"But a candid observation of facts would lead one to agree with Rousseau, Compe, Graser, Scripture, and a host of other German and American teachers who, regarding only the child's normal development and noting the increasing nervousness, injury to the eyes, and poor writing combined, proclaim with emphasis *that the normal nascent period for learning penmanship is from nine to thirteen, and not earlier*. Certainly this is the period when the handwriting is acquiring its individuality and the writing habits are getting their set. Hence practice and drill on regularity of slant, uniformity of height and shading, and gracefulness of outline will now be most effective and lasting. . . . To potter along with sixty minutes a week spread out through eight or nine years is to dissipate all interest and all lasting results in motor training. The Committee of Fifteen very wisely drops it out of the curriculum after the sixth grade, but for reasons stated above, very unwisely assign the drill period in penmanship to the first and second school years, instead of the fifth and sixth."

Professor John Dewey, of the department of philosophy and pedagogics in the University of Chicago, in a recent article on "The Primary Education Fetich,"¹ speaks of primary school writing as follows: "There is an order in which sensory and motor centers develop,—an order expressed, in a general way, by saying that the line of progress is from the larger, coarser adjustments having to do with the bodily system as a whole (those nearest the trunk of the

¹ *The Forum*, May, 1898.

body) to the finer and accurate adjustments having to do with the periphery and extremities of the organism. To violate this law means undue nervous strain; it means putting the greatest nervous tension upon the centers least able to do the work. The act of writing—especially in the barbarous fashion, long current in the school, of compelling the child to write on ruled lines in a small hand and with the utmost attainable degree of accuracy—involves a nicety and complexity of adjustments of muscular activity which can be definitely appreciated only by the specialist. Forcing children at a premature age to devote their entire attention to these refined and cramped adjustments has left behind it a sad record of injured nervous systems and of muscular disorders and distortions."

Summary. — Combining the imperative conditions in large public schools with the results of modern psychological investigations, it seems safe to say that, during the first three or four years in school, children should learn to write an easy hand with comparatively little drill in exact uniformity of style; that the next two years should be the period of drill in slant and proportion to fix the handwriting; and that thereafter the training in penmanship should be incidental in connection with written school exercises. It seems safe to say, further, that in the future when pupils shall be trained, in accordance with psychological principles, to learn reading, writing, and drawing carried along together, better results will be obtained with less waste of time, in each of the three branches.

III. MODERN WAYS OF TRAINING IN ORTHOGRAPHY.

The Spelling Book. — In the district school of a century ago, spelling was studied from the columns of a spelling book and recited orally in class, with little or no attention to the meaning or use of words. Written spelling was unknown. For nearly three quarters of a century, Web-

ster's Spelling Book (1783), held almost undisputed sway in American schools. It was undoubtedly a great aid in securing correct pronunciation in schools at a time when a dictionary was a rare possession ; but its method, notwithstanding, was formal, logical, mechanical, and unpsychological. Yet it is not wise to underrate the educational usefulness of this famous schoolbook during the long period which elapsed before it was superseded by something better. It at least secured a regular and rigid drill, and enlarged to some extent the vocabulary of the several generations that toiled over it.

When graded reading books made their appearance and teachers began to require various written exercises in school studies, the spelling book fell into disrepute ; and in many schools it was dropped out altogether. But the experiment of dispensing entirely with formal lessons in spelling proved unsatisfactory, and a modified spelling book was restored in the form of numerous Word Primers and Word Books, the type of which was largely determined by Swinton's Word Book Series (1873).

How Spelling is Learned. — Spelling is mainly learned in reading, in writing compositions, and by other written school exercises ; but the great majority of teachers find it desirable to supplement this indirect and incidental training by the study of a modern word book which includes elementary defining and more or less of word analysis, or a study of prefixes, suffixes, and definitions.

Oral Spelling. — Make some use of oral spelling to train the ear as well as the eye, and to secure careful pronunciation. Written spelling, if used exclusively, becomes wearisome to pupils. Allow the class, occasionally, to "choose sides" and have a spelling match, thus appealing to good-natured emulation. In oral spelling, require

pupils to pause in spelling after each syllable to show the division into syllables; but do not require each syllable to be pronounced separately.

Text-Book. — If a word book or a spelling book is required by the official course of study, make the best possible use of it. Swinton's Word Primer and Word Book may prove helpful for supplementary purposes.

Correcting Papers. — After a lesson in written spelling let pupils exchange papers and correct the spelling in one another's papers. This exercise in criticism is one of the most profitable of spelling lessons.

Word Study. — The teaching of spelling should be so conducted as to unfold something of the meaning of words, and something of the formation of derivative from primitive words and roots. The exercise then becomes a part of good intellectual training, instead of a blind effort of memory.

Defining. — It is not wise to require pupils to give formal definitions of words when the meaning is already well enough known. Pupils should be trained at an early age to the habit of referring to the school dictionary for definitions. Mark any difficult words in the advance reading lesson, and require pupils to find out the dictionary definitions. Give out, once or twice a week, a list of five words to be defined at the next lesson. Exact and full definitions should be required, in general, only from advanced pupils, when they have gained the knowledge necessary to frame definitions. A simple explanation of the *use* of a word is often better than a formal dictionary definition. Beware of defining a word by means of a synonym equally incomprehensible.

Waste. — Learning to spell the English language is a long-continued and laborious task, and there is little reason

to expect that the irregular orthography of our mother tongue will ever be so reformed that spelling will be made easy. The chief waste of time in school consists in requiring children to attempt to learn to spell words which are entirely outside of their possible vocabulary.

IV. MODERN THOUGHT ON ELEMENTARY DRAWING.

Practical Value of Drawing. — The general introduction of drawing into both country schools and city schools marks one of the most notable means of enriching the course of study. Drawing has become a special aid in nature study. It is a source of unfailing pleasure and interest to children; it lies at the foundation of manual training; it is an important aid in the study of geography and history. Finally, it affords an æsthetic training that will make life pleasanter and happier.

Hindrances. — The limitations to which most teachers are subjected I fully understand, having been subject to them myself during many years of teaching. Wherever "a system of drawing" has been officially adopted by boards of education or school trustees, teachers must master the directions and require pupils to fill out each successive number of the drawing books, whether the system be good or bad. Unfortunately, the general introduction into elementary schools—some twenty years ago—of formal systems of industrial, or geometrical, or mechanical, or design drawing, proved unsatisfactory in results. Even the employment of large numbers of special teachers failed to awaken any vital interest in drawing. The system pursued in technical art schools for older pupils or adults cannot profitably be applied to the lower grades in public schools.

But whatever may be the limitations of the adopted course of study, it is possible for teachers to supplement the required work with various exercises in drawing adapted in some measure to the successive culture epochs of young children.

Practical Hints and Suggestions. — Drawing, as a means of expression, should begin with the first lessons in reading and writing and should be carried along hand in hand with both. Drawing, indeed, is a primitive mode of expression which preceded the invention of letters. It is in accordance with psychological method that the first efforts of children should be directed to rude drawing rather than to writing.

The primary children may be sent to the blackboard to copy something drawn by the teacher, or to indulge their fancy by drawing whatever they choose. Children do not hesitate to attempt houses, trees, hills, dogs, and the human figure. They prefer blackboard drawing with crayons to exercises on slates or paper, because their drawings are on a larger scale. Besides, teachers and pupils can see the pictures. Direct their feeble efforts, but leave full play to individuality. One child may take to flowers, another to boats and ships, a third to houses, and a fourth to horses.

Allow pupils from the beginning to attempt drawing from real objects instead of from pictures on the flat. Drawing a leaf from the flat copy is only a makeshift compared with sketching the outline of a real leaf placed on the desk right before the eyes of the child. Drawing a house from the flat copy may secure a slow and painful accuracy and finish, but the process is dead drudgery compared with the attempt to make a crude outline of a real house.

The most attractive and most profitable exercises in drawing will be those made in connection with oral lessons in elementary natural science, or with geography, or with history. Here drawing supplements writing.

Dr. Lukens presents the subject psychologically as follows: "In the course in drawing, (as in writing) the same three stages should no doubt be provided for. In kindergarten and primary schools abundance of pictures and models should be on hand and should be made use of in every subject. Then comes the second transitional play stage of imitation and suggestibility before the skill of hand and the right attitude of mind for artistic production are developed. During this time drawing seems properly merely a language for expressing ideas, and should be so used in connection with all the other subjects of study. Diagrams, illustrated stories, and pictures of everything the children are interested in, will be the natural and pedagogical course as opposed to the systematic course, now so universal, and yet so out of place in the lower grades. At about ten years of age, Barnes thinks, (and all the others who have made special studies of the subject seem to agree with him) the child may with profit take up the technique of drawing, or its grammar and rhetoric, as he calls it."¹

At ten or twelve years of age, then, pupils having had this preliminary training may begin to learn the technique of drawing. At the right time, geometrical, mechanical, and instrumental, and design drawing may be made both interesting and useful.

As my ideal of natural free-hand drawing in an elementary school, I have in mind a grammar school for girls, which also included primary grades, in San Francisco. For the purpose of experiment, this school was excepted from the conventional "system" required in other schools, and the principal and teachers were given full liberty to teach drawing according to psychological principles. In the first and second grades, the children began by drawing from real objects placed on their desks,

¹ The Second Year Book of the National Herbart Society (1896).

such as a leaf, a fern, or a spray of ivy, or a flower, or a specimen of fruit. Their work was free and easy, but it was followed up with the keenest interest. In the third grade their work showed artistic taste. In the fourth grade they were painting flowers in water colors. In the next two grades the girls could look out of the windows and sketch a city street in perspective, or make a good outline of Telegraph Hill. In the two higher grades, they could make in fifteen minutes a good sketch of a human figure drawn from a little girl perched on the teacher's desk. An atmosphere of artistic taste pervaded the whole school. Drawing was a perennial source of delight. The teachers as well as the pupils were enthusiastic.

V. VOCAL MUSIC AS A MEANS OF CULTURE.

Fifty years ago, in country schools, singing was the exception, not the rule, and in city schools the instruction in music was meager and unsatisfactory. Now, in most large cities a special teacher is employed to supervise and direct the teaching of music. It is the exception to find a rural school in which singing is not a daily exercise.

The kindergarten schools afford a good illustration of the extent to which rote singing can be carried with young children before they learn to read. The number of songs which these little children memorize and sing is a marvelous proof of the retentive memory of early childhood. In the kindergarten, the songs are selected with special reference to melody; and the children act them out by movement and gesture while singing them by words. The songs best adapted for children in the first

two years in the primary school will be found in the various publications of kindergarten songs.

The extent to which formal instruction in music and singing by note can be carried in small rural schools must be determined according to conditions. But singing by rote or by note is an essential school exercise.

Apart from its great value as a means of æsthetic culture, singing is one important means of cultivating the voice for expression in speech and in oral reading. In the recital of poetry, there is always a touch of the rhythm, melody, and harmony of song. The powerful effect of school singing in stimulating the emotions is universally recognized. It is impossible to over-estimate the stimulus to patriotism resulting from the long-continued singing during the whole school course of such songs as "America," the "Battle Hymn of the Republic," "Rally Round the Flag, Boys," and other national songs and hymns. How much dearer has home been made to us all by the singing of "Home, Sweet Home!" How many friendships have been made stronger by the singing of "Auld Lang Syne!"

CHAPTER VI

THE ART OF TEACHING LANGUAGE LESSONS AND GRAMMAR

Grammar. — Within the last twenty years the use of a formal text-book on grammar has come to be limited in the best schools to the last two years of the grammar-school course. The general introduction of written exercises and written examinations, the written work in elementary science, in history, in geography, and in letter-writing — all lend their aid in training children to acquire the habit of using language with some degree of "correctness and propriety," without the study of grammar. This is the natural method of development. In the lower grammar grades, the formal text-book on grammar has been superseded by "Language Lessons," in which the simpler parts of grammar are taken in connection with written sentence work and composition.

The variety of good reading matter now available for school children is undoubtedly an important factor in training them to speak and write their mother tongue. But most teachers will admit that somewhere in the school course there must be some formal study of grammar. Colonel Parker, who cannot be classed as a conservative, remarks in his *Talks on Pedagogics*: "Whenever and wherever, throughout the course, a part of speech, a fact of etymology, a definition, an explanation, a rule, or general direction, a lesson in parsing or analysis, will directly assist pupils in comprehending or adequately ex-

pressing thought, any and every detail of grammar should be freely presented and freely used."

There is little difference of opinion about the high value of a careful study of grammar in secondary schools. Sentence analysis is a logical study of the forms of thought. The study of English syntax increases the power of interpreting thought in literature. It affords the student a standard of self-criticism in a careful revision of his own writing. It opens the mind to the great lines of thought in logic, rhetoric, and philosophy.

A knowledge of grammar is essential to a full appreciation of the masterpieces of literature. With advanced pupils, the right study of grammar is a means of mental discipline fully equal to that of mathematics. "I hold," says Tyndall, "that the proper study of language is an intellectual discipline of the highest kind. The piercing through the involved and inverted sentences of 'Paradise Lost'; the linking of the verb to its often distant nominative, of the relative to its distant antecedent, of the agent to the object of the transitive verb, of the preposition to the noun or pronoun which it governed; the study of variations in mood and tense; the transformations often necessary to bring out the true grammatical structure of a sentence — all this was to my young mind a discipline of the highest value, and, indeed, a source of unflagging delight."

But the unsettled point in dispute is the extent to which the teaching of grammar can profitably be carried in the elementary course of study in the common schools. There has been a general revolt against the "Murray type" of text-books; against Latinized parsing, and against the hair-splitting refinements of sentence analysis. As a natural result, many teachers have been led to the opposite

extreme of advocating no instruction whatever in technical grammar below the high school grades. On the other hand, there are many schools in which the Murray type of grammar still reigns supreme. Teachers who were themselves trained under the old régime cling to the forms of parsing and sentence analysis with which they have grown familiar. They greatly overestimate the value of text-book grammar to the great majority of common school pupils, who leave school at fifteen or sixteen years of age. In consequence of educational bias, they underestimate the worth of composition work and language training. Having become grammatical experts by drill in teaching parsing and analysis for many years, they unconsciously assume that this kind of training is of inestimable value to their pupils.

Language Teaching. — The general method in language teaching pursued in a majority of graded schools at the present time may be briefly stated as follows:

1. During the first three years of school life, reading, story-telling, and easy exercises in sentence-making and composition-writing.

2. For the next three years, the beginning of literature in supplementary reading; the writing of compositions in connection with nature study, history lessons, literature, and geography; and the use of some text-book on language lessons.

3. During the last two years of the course, the study of some formal text-book on grammar; reading of a distinctly literary character; composition-writing on topics correlated with school work.

Hints and Suggestions on Methods of Teaching — Language Lessons. — In the lower grades, language lessons and composition work constitute the best means of

acquiring a ready and correct use of language, which usage, in its turn, becomes a sound basis for the study of formal grammar. As children learn to speak good English by hearing it spoken in school or at home, so they learn to write good English only by continued practice in writing under the direction and criticism of teachers. As a guide to first lessons in this work Swinton's *Talking With the Pencil* (1898) will be of value.

Stories. — It is one of the best of exercises to let children reproduce from memory, in their own words, stories told them by the teacher, or which they themselves have read. In this way writing becomes a pleasure instead of a task. Originality in thought ought not to be expected of children.

Letter-Writing. — One of the most practical of all exercises is letter-writing. As soon as children can write at all, they ought to be trained to write a short letter. In every grade during the whole course, repeated exercises in letter-writing should be given, so that on leaving school every child should be able to write a letter neatly and correctly,

In the best of modern schools the work in composition is mainly done in connection with nature studies, oral lessons in history, and lessons in geography. In this way writing becomes a pleasure. The work in composition is in accord with the pupils' mental equipment. In order to learn the art of expression, children must have definite thoughts to express. There is a general consensus of opinion among modern teachers that writing the English language is an art which must be learned by actual practice in written composition, rather than by the study of a text-book on grammar.

Formal Grammar. — In the grammar grade next to

the highest, that is, in the seventh or eighth school year, if a formal text-book on grammar is taken up, teachers should first give their attention to the essential parts of etymology, assuming that pupils have previously learned something about the sentence. Special attention should be given to personal pronouns, to verb-forms and the tenses, to irregular verbs, to participles and infinitives.

The forms for parsing should be brief and simple, limited, in the main, to the construction that is, the use of the word in the sentence. For example, in the sentence, "America has furnished to the world the character of Washington," it is quite enough to say: "*America* is a proper noun, subject of the verb *has furnished*; *has furnished* is a verb in the present perfect tense, agreeing with the subject *America*; *world* is a common noun, object of the preposition *to*," etc.

Sentence analysis, free from technicalities and diagrams, may profitably be correlated with parsing. It is sheer waste of time to parse every word in a sentence. Select from a reading lesson only the words that are most important in the structure of a sentence, or that are placed out of their regular order; e. g. in the sentence, "Their furrow oft the stubborn glebe has broke," — parse *glebe*; "Now fades the glimmering landscape on the sight," — parse *landscape*.

The ancient Latinized models involve too great waste of time for modern school use. Such endless repetitions of definitions and grammatical terminology result neither in "logical training" nor in readiness of expression. Sentence analysis, — limited, is useful, but, when carried to extremes, it becomes a dead formalism, quite as unattractive to pupils as was the old-time parsing. The extent to which teachers carry parsing and sentence analysis

must be modified by their school environment, or their school text-books, or the examinations to which their pupils are subjected. Comparatively few teachers are free agents to determine their course of instruction for themselves.

Syntax. — In the highest grammar grade, the subject of syntax may be taken up, limiting the work mainly to the half dozen rules that have the closest practical relation to the writing of English. In this grade literary study should be combined with grammatical study. Suppose, for instance, the class were to take up Gray's *Elegy*, one of the most elaborate of short poems in the English language. This study would involve a wide range of thought. The poem is full of figurative expressions; of historical allusions; of long sentences that sometimes include two or three stanzas. In some instances owing to the transposed structure of a sentence, it is not easy to determine which word is the subject and which the object of the verb. But the teacher with a little forethought can make the study one of lively interest. After such a course with a large normal class, many of the students came to me and said that they had never before perceived any practical use of grammar as applied to the study of literature. In the city of San Francisco, this poem, selected from the adopted school reader, was assigned for special study in the highest grammar-grade class. Near the end of the year, I had the pleasure of examining, orally, more than thirty classes, most of which far exceeded my most sanguine expectations of success.

Take another illustration of the possible use of a stanza from Byron's *Apostrophe to the Ocean*, found in most of the school readers.

"The armaments which thunderstrike the walls
Of rock-built cities, bidding nations quake
And monarchs tremble in their capitals;
The oak leviathans, whose huge ribs make
Their clay creator the vain title take
Of lord of thee, and arbiter of war—
These are thy toys, and, as the snowy flake,
They melt into thy yeast of waves which mar
Alike the Armada's pride, or spoils of Trafalgar."

Put the following questions to a class, and note the results:

- (a) What kind of sentence is this stanza?
- (b) What is meant by "armaments"?
- (c) Parse *nations*.
- (d) Parse *tremble*.
- (e) Meaning of "oak leviathans"?
- (f) Who is "their clay creator"?
- (g) "Lord of thee"—Lord of whom?
- (h) Explain the allusion "Armada's pride."
- (i) How did the yeast of waves mar the "spoils of Trafalgar"?

Difficulties. — Grammar is one of the most difficult of the common-school studies. To teach it successfully requires the highest degree of skill in the fine art of teaching. "It is more difficult than arithmetic," says Bain, "and is probably on a par with the beginnings of algebra and geometry." Therefore teachers should be very patient with pupils that make slow progress in the study of grammatical technicalities.

The text-book study of grammar presented according to the scholastic logic of the Middle Ages, is now limited, in the main, to the two higher grades of the common school. As it has taken a century to lop off orthography and prosody from this subject, and to introduce language work in the lower grades, it may require a long siege to

force the last intrenchments of Latinized English grammar in the eighth and ninth grades. There are many thousands of suffering teachers who are expectantly waiting for some modern text-book adapted to these two grades. Such a book should treat lightly on etymology, briefly on practical syntax, and largely on plain composition-writing. The conventional Murray type is already obsolete, except in remote rural and pioneer schools, and in the schools of a few cities which have been stricken with arrested development in consequence of political misrule. The metaphysical refinement of interminable sentence analysis with long-drawn-out diagrams is fast disappearing, because the time is needed for better things. Rightly understood, properly taught, and kept within reasonable bounds, the study of English grammar in the highest grade in the common schools may prove of interest and practical value to the great mass of pupils.

Formal Composition. — In the highest grades of the common school, whether in city or country, it ought to be possible for most teachers to take up, in addition to the composition-work done in connection with other school studies, a short specified course in special composition exercises. Of the four types of prose writing, pupils ought to take up the narrative and the descriptive, leaving exposition and argumentation for the high school or college. For such work no text-book will be needed by pupils if the teachers have a practical knowledge of the subject.

The beginning should be made easy and interesting. Teachers will direct the selection of suitable subjects, making sure that they are in keeping with the pupils' stock of ideas. Sometimes half a dozen subjects may be named, allowing each pupil to select the topic that suits

him best. Occasionally, throw the responsibility of finding a subject upon the pupil, as an encouragement to originality. But in general avoid all abstract topics, and most subjects that require the free use of an encyclopedia. Occasionally, the outline of an essay may be given to pupils to fill out. Special attention should be given to the division of a composition into paragraphs. A composition of any kind should have a suitable beginning and a fitting end ; must be capitalized and punctuated ; must be free from gross blunders in syntax. But reasonable teachers will not expect pupils to become finished writers, and will be very tolerant of crude efforts.

Need of a Standard. — At present there seems to be no generally recognized standard of attainment for common-school pupils in grammar and composition. There are many rural schools, and city schools not a few, in which composition writing is an unknown art, and in which grammar is limited to the dry husks of text-book technicalities. The process of emancipation from custom, tradition, and educational bias is painfully slow. The existing condition is fairly set forth by Professor B. A. Hinsdale in *Teaching the Language-Arts*, (1897), as follows :

"In no department of study have the schools recently seen more dissatisfaction, more unrest, and more experiment than in this one. Everything is in a flux ; authors, superintendents, and teachers seem to appreciate that something bearing the name of English must constitute a marked feature of the schools ; but they do not, as classes at least, see clearly what it should be, or how it should be taught. As a whole, the schools are feeling their way ; as a body, teachers are wasting a great deal of their own and their pupils' time and energy in efforts more or less aimless and misdirected ; and there is little probability of the return of that unity and satisfaction which so strongly marked the Lindley Murray *régime*. Two things are clear : One is that the old

régime cannot be brought back; the second is that to teach English successfully requires a combination of cultivation, taste, judgment, and practical skill which is not found in the common teacher of the subject."

Modern Text-Books.—A helpful book for teachers as well as pupils is found in Charles De Garmo's *Language Lessons* (1897). Book I. of this series is designed for use of the pupil during the third and fourth years of the graded school; Book II. for the two succeeding years.

In his preface the author states important principles, which are now generally accepted by progressive educators: "There are two leading ideas in these Language Books. They are (1) Progressive Exercises in Composition, and (2) an Inductive Approach to Grammar. The work is consequently divided into two classes of lessons, Sentence Exercises and Composition Exercises. It is a pre-eminent characteristic of both classes of exercises that they provide for the pupil a language experience, instead of presupposing one that he does not have. This conduces both to interest and comprehension."

Another recent book of great value is *Elementary English* by E. Oram Lyte, Principal of the First Pennsylvania Normal School, Millersville (1898). The author's preface says: "This is a first book on formal language study. The subject as here presented is divided into three parts, each part representing a year's work in this branch. The method of development is inductive. What children are interested in, and what they may easily be led to be interested in, determined the nature of most of the lessons here presented." Lyte's *Elements of Grammar and Composition*, (1898), is the second book of this language series, designed for a two or three years' course in the grammar grades, is admirably adapted to its purpose. There is not too much of it, in which fact consists its great merit. Conservatives wedded to the formalism of the past may not like it, but it will be given a hearty welcome by thoughtful teachers who have long been waiting for just such a natural way of presenting the subject of grammar to the average grammar school pupil. The third book of Lyte's *Language Series*, *Advanced Grammar and Composition*, is for use in high schools and normal schools.

CHAPTER VII

PEDAGOGICAL PRINCIPLES APPLIED TO ARITHMETIC

MOST official courses of study, however definitely laid down and marked out, admit of some discretion on the part of teachers. It is desirable, therefore, for all teachers to hold clearly in mind the chief aims to be considered in teaching arithmetic. The suggestions made in the following rough outlines are intended as hints in the direction of modern tendencies among progressive teachers. They are derived from an extended examination of courses and text-books, from some experience in teaching, from a wide field of observation as a school-examiner and school superintendent, and from recent addresses and discussions on the subject of reform in teaching arithmetic.

FIRST GRADE OR YEAR.

The wise teacher of a class of beginners will first take an account of the stock of arithmetical knowledge which her pupils have acquired, at home, before entering school. In city classes she will find many children experts in counting, in reckoning the small coins of United States currency, and in making change. The knowledge of such children is empirical, it is true, but the teacher can utilize it to advantage. It would be refined cruelty to hold such pupils to the strict limitations of the Grube system or to the number 10, or 20, or 100. Perhaps some section of her class may need slow and patient drill with "counters;" if so, give it to them, but begin the drill with ab-

stract numbers as soon as possible. No harm will come to the children if they learn to count to 100 by 1's; by 2's; by 10's. Take addition and subtraction of small numbers first; in due time take multiplication and division. It is not wise to crowd four rules on the helpless children all at once. The Grube method with its endless "grind" on all possible combinations may be philosophical and logical, but it is not psychological, and it is often carried to absurd extremes. Children in this grade are keenly alive to arithmetic of the kind suited to them, but the making of endless tables of figures with plus and minus signs is neither rational nor attractive work. For various kinds of natural ways and means the teacher must fall back on her enlightened common sense. It may be advisable to let the children learn that "12 inches make 1 foot," by actually, themselves, measuring off twelve inches on the blackboards. Most of them knew before they came to school that there are 5 cents in a nickel, 10 cents in a dime, 10 dimes in a dollar, 2 quarters in a half dollar, and 2 half dollars in a dollar. The time given to continuous class drill in number work should not exceed 10 or 15 minutes in any one lesson. The teacher who feels the need of a text-book of detailed lessons will find Baird's *Graded Work in Arithmetic, First Year*, a very helpful book of well-arranged exercises of all kinds. Another modern book is Bailey's *American Elementary Arithmetic for the First Five Grades* (1898). But teachers should avoid all forcing processes and rest content with beginnings.

SECOND GRADE OR YEAR.

The average limitations of number work in this grade run in most schools as follows: exercises in the four rules

limited, in general, to hundreds of thousands; the multiplication table through 5's or 6's; counting by 2's, 5's, and 10's to 100; addition of two-place numbers, no sum of units or tens to exceed 10; — e. g. 43 and 24, etc.; subtraction of two-place numbers, without "borrowing;" multiplication of two-place numbers by 2 and 3, no product to exceed 10: — e. g. 23 by 3, etc.; division of two-place numbers, — e. g. $64 \div 2$, etc.; easy problems such as are found in most primary arithmetics; inches, feet, and yards, by actual measurement by pupils themselves; pint, quart, gallon, by actual measurement; cent, nickel, dime, dollar, by actual inspection of the coins, and by simple business questions in making change. As an experiment the above limitations may be supplemented by exercises in finding $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, and $\frac{1}{10}$ of small numbers evenly divisible by 2, 3, 4, 5, and 10; and by taking up the reading and writing of dollars and cents, — e. g. \$1.25, \$1.50, \$5.00, etc.

Fractions. — There seems to be no psychological reason why the *beginning* of a limited practical use of both common and decimal fractions should not be made in the second school year, and continued, under due limitations, in easy inductive lessons in the third and fourth grades, as a fitting preparation for formal text-book treatment in the fifth grade. But as it took me many years of teaching and experiment to reach this conclusion, I have no doubt that many teachers will dissent from it.

The general postponement of any written work with fractions until the fifth school year or grade seems to have been the result of the arrangement of the old-fashioned one-book arithmetics under which it was impossible for pupils to reach fractions until about that period. These books began with definitions and rules but omitted

inductive elementary exercises altogether. When pupils finally reached common fractions at ten or eleven years of age, they were required to go over many dreary pages of unprofitable work on factors, prime factors, greatest common divisor, least common multiple, common denominator, and least common denominator, before they could reach the practical operation of adding $\frac{1}{2}$ and $\frac{1}{4}$. Moreover, the subject of common fractions was exhaustively treated and applied to complex and difficult problems before pupils were taught the simplest operations in decimals or in the decimal currency of the United States.

Teachers who were trained when pupils under the formal, logical, deductive order of text-book presentation of arithmetic do not always take kindly to the natural method of easy inductive lessons which ought always to prepare the way for a final formal treatment of the subject.

The fact is that when children enter school at six years of age, most of them are familiar with "halves" and "quarters" though they may not be able to express them in arithmetical form. They will tell you that one-half of half an apple is a quarter of an apple, though they know nothing about "multiplication of fractions." They begin school with some practical knowledge of the decimal currency of the United States, though they know nothing of "decimal fractions." Now by utilizing the knowledge which they already have, the skillful teacher can make their first lessons in fractions pleasant and profitable.

When superintendent of the schools in San Francisco, I personally tested the elementary knowledge of more than a hundred classes in the first and second grades in which, according to the course of study, no instruction whatever had been given in fractions. In every class in

the first grade some pupils knew how to write $\frac{1}{2}$. One little girl when asked how she learned to write it, answered, "I live at 212 $\frac{1}{2}$ Pacific St." They added halves almost as readily as wholes.

In the second grades when the children were asked to write $\frac{1}{2}$ and $\frac{1}{4}$, from ten to twenty per cent. of them did it, much to the surprise of their teachers. When the children were asked to add one-half an apple and one-quarter of an apple, the oral question was correctly answered, usually by from ten to twenty pupils in each class. Then they went to the blackboard, wrote the fractions, added them, and told how they got the answers. They said nothing about reducing fractions to a common denominator. They simply said, "One half is two quarters, and two quarters and one quarter are three quarters." These same children were experts in "making change" and some of them could write dollars and cents, though they had been taught neither "decimal fractions" nor "United States money" at school. My presumption that the children had brains and had learned something outside of school was correct.

Inductive lessons in arithmetic should begin with questions about something that pupils already know, and should gradually lead up to something new to be found out. In giving such development lessons, teachers should explain to the class nothing that pupils can readily find out for themselves, should tell nothing in advance, and should lend a helping hand only when the class fails after having had ample time to think. This process is slow but very effective. In development lessons the fractions should be strictly limited to such as are used in the ordinary business of life. As statistics show that nearly one half of the pupils of the public schools leave school

before they reach the fifth grade, or year, it is a matter of practical importance that such children should leave school with some business outfit of simple operations in both common and decimal fractions.

Colonel Parker in his *Talks on Pedagogics* says: "The putting off of the teaching of fractions to the fifth and sixth grades is simply putting in abeyance an essential means of developing the mind. The child, when he reaches the fifth grade may know all there is to be known of fractions with the greatest ease, if fractions are really taught,—not the mere notation and numeration of fractions. Fractions should be taught from the first to last, and the same can be said in regard to decimal fractions. Decimal fractions in notation have a great advantage over common fractions. Decimal fractions are perfectly easy and should be taught when ten is taught, and the notation of decimal fractions should always be learned and used when required in the development of number." . . . "We have great complaint that children go out of school, after four or five years of study, without any knowledge of arithmetic, and the cause for this is that these subjects are out of their pedagogical relation. They have an artificial, illogical place in the course. Tradition has taught us to put off these things until a certain time comes,—a time when half of the children of the United States are out of school. The genuine demands for a child's growth always include the best for practical life at all times."

Superintendent J. M. Greenwood of Kansas City states in his dissent from the "Report of the Committee of Fifteen:" "There is really no valid argument why children in the second, third, and fourth years in school should not master the fundamental operations in fractions. Not only this, they will put the more common fractions into the technique of percentage, and do this as well in the second and third grades as at any other time in their future progress. . . . In decimals, the pupil is really confronted by a simpler form of fractions than the varied forms of common fractions. . . . There should be a rearrangement of the topics in arithmetic so that one subject naturally leads up to the next."

In the Report of the Commissioner of Education (1893-94, Vol. I.,) there are 60 pages of verbatim reports of recitations in arithmetic and language in the schools of Kansas City, Missouri, furnished by Superintendent Greenwood, who had stenographic reports taken of lessons

given by teachers under his direction. These lessons show the possibilities in the practical use of fractions in the first, second, third, fourth, and fifth grades.

THIRD GRADE OR YEAR.

The conventional work includes, in general, drill on the multiplication table to 10's or 12's; addition by "carrying," and subtraction by "taking from higher order;" multiplication with "carrying" and with two-place numbers for a multiplier; long division limited to small numbers. All of the work should be kept within reasonable limitations. There is a general tendency, fostered by the old-type arithmetics, to run the children at once into large numbers, long operations, and difficult problems. It is well to keep in mind a recent statement (1898), by Dr. E. E. White: "The forcing of young children to do prematurely what they ought not to do until they are older, results in what Dr. Harris calls, 'arrested development.' The colt that is over-speeded and over-trained when *two* years old, breaks no record at *six*. There is such a thing as too much training in primary grades; an over-development of the reason. A little child may be *developed* into a dullard. More natural growth and less forced development would be a blessing to thousands of young children."

What the children in this grade really need is a great variety of comparatively easy exercises, dealing with numbers kept within reasonable limits, and with exercises that have some relation to their daily life. They need careful drill in accuracy, not abnormal rapidity of operation. They need drill on hundreds of short operations, not long-continued drill on ledger columns of addition, or puzzling problems that have no relation to human life or to business.

Baird's Third Year's Work is full of reasonable and practical exer-

cises. The preface to this book contains the following statement which should be kept in mind by teachers: "As many pupils are unable to attend school beyond the grade for which this book is intended, there are here included some of the applications of arithmetic, a knowledge of which will give to the pupil power to solve many problems of every-day occurrence." Accordingly, there are given a great many exercises which involve the use of dollars and cents in business examples. A few business fractions are introduced in a natural way, without note, or comment, or definition. For the use of any teacher who may wish to experiment still further in this direction, a few forms of inductive exercises are here introduced, which any teacher can supplement to any extent with similar models of her own.

Models for Inductive Exercises.—Proceed at once, without any talk about numerator or denominator, to give a great many drill exercises in writing and adding after the type of exercises given below. As children are accustomed to write whole numbers in vertical columns for adding, it is the more natural way for them to write fractions in the same manner.

Send the class to the blackboards, dictate the examples, give pupils ample time to think, and ascertain how many can do the work without any assistance. If put upon the right track, many pupils will find out for themselves a method for working an exercise in arithmetic. When necessary, help out pupils by a hint in the right direction.

ADDITION OF COMMON FRACTIONS.—SLATE MODEL.

(a)	(b)	(c)	(d)	(e)	(f)	(g)
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{10}$	$6\frac{1}{2}$	$2\frac{3}{4}$	$2\frac{1}{8}$
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{10}$	$2\frac{1}{2}$	$2\frac{3}{4}$	$3\frac{3}{8}$
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{10}$	$5\frac{1}{2}$	$5\frac{3}{4}$	$1\frac{3}{8}$
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{10}$	$4\frac{1}{2}$	$6\frac{1}{4}$	$5\frac{1}{8}$
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ADDITION OF DOLLARS AND CENTS AND DECIMALS.

One good way of teaching decimals to beginners is by means of exercises in writing and adding dollars and cents, the change from reading and writing dollars and cents to reading and writing whole numbers and *hundredths* is easily made, because most children know there are 100 cents in a dollar.

FIRST STEPS IN ADDING DOLLARS AND CENTS.

(a)	(b)	(c)	(d)	(e)	(f)	(g)
\$1.50	1.50	\$2.10	2.10	\$4.05	4.05	\$1.12½
<u>\$1.25</u>	<u>1.25</u>	<u>\$2.15</u>	<u>2.15</u>	<u>\$2.05</u>	<u>2.05</u>	<u>\$1.12½</u>

MODEL FOR SLATE WORK IN ADDITION.

(a)	(b)	(c)	(d)	(e)	(f)
2½	\$1½	\$1.50	\$¼	\$0.25	.25
<u>3¼</u>	<u>\$1¼</u>	<u>\$1.25</u>	<u>\$½</u>	<u>\$0.50</u>	<u>.75</u>

MODEL FOR SLATE WORK IN MULTIPLICATION.

(a)	(b)	(c)	(d)	(e)	(f)	(g)
4½	5¼	6⅞	6.3	\$4¼	\$4.25	4.25
<u>×2</u>	<u>×3</u>	<u>×3</u>	<u>×3</u>	<u>×3</u>	<u>×3</u>	<u>×3</u>

DIVISION.

(a)	(b)	(c)	(d)
$\frac{1}{2}$ of 4	$4 \div 2 = ?$	$\frac{1}{2}$ of \$ 4.20	$\$ 4.20 \div 2 = ?$
$\frac{1}{2}$ of $\frac{4}{5}$	$\frac{4}{5} \div 2 = ?$	$\frac{1}{4}$ of \$16.80	$\$16.80 \div 4 = ?$
$\frac{1}{2}$ of $\frac{6}{10}$	$\frac{6}{10} \div 2 = ?$	$\frac{1}{2}$ of \$ 1.00	$\$ 1.00 \div 2 = ?$
$\frac{1}{2}$ of .6	$6 \div 2 = ?$	$\frac{1}{5}$ of \$10.25	$\$10.25 \div 5 = ?$

FOURTH GRADE OR YEAR.

This course, in general, includes addition and subtraction, numbers not to exceed thousands; multiplication, the product not to exceed five or six places; division, divisors not to exceed two places. Tables learned and applied in actual measurements; — square measure — inch, foot, yard; cubic measure, inch, foot, yard. To this outline there might be added by the teacher willing to make experiments, the following: addition and subtraction of dollars and cents; of decimals not exceeding hundredths; easy business examples involving the multiplication of dollars and cents by multipliers not exceeding ten, etc.

If two books are used, as is the case in many schools, teachers should take special pains to correlate the mental or oral arithmetic with the work found in the text-book on written arithmetic. Teachers who may wish to give supplementary work in common and decimal fractions, and dollars and cents, will find Baird's Graded Work in Arithmetic—Fourth Year—a helpful hand book; also Bailey's Arithmetic and any one of several other modern text-books.

FIFTH GRADE OR YEAR.

Whatever may be the arrangement of the school text-book used by pupils, the teacher should modify its arrangement so that attention should be concentrated on accuracy in the four rules by means of practical business problems involving comparatively small numbers; on common and decimal fractions, taught inductively as far as practicable; on the common business tables of weights and measures and their practical application in life. Unfortunately many of the arithmetics in use contain a great deal of traditional padding, and vast numbers of examples and problems that have little or no relation to the business life of to-day. An excellent series of inductive exercises in common and decimal fractions will be found in Baird's Parts IV. and V.; in Bailey's Elementary, and in other modern text books.

SIXTH GRADE OR YEAR.

The chief work in this year, according to the average course, will be common and decimal fractions taken up in formal text-book style, and the practical application of tables to the ordinary business pursuits of life. The objective points are to make pupils accurate, and to enable them to see through reasonable problems and apply principles for themselves. They should be trained to test and prove their own work. They should also be taught how to make out a bill and reckon it accurately, how to write a promissory note, and how to write a receipt. It is desirable, further, that pupils should be taught the elements of percentage, and a business method of reckoning interest on small sums of money for one year and fractional parts of a year. This should be done for the benefit of large

numbers of pupils that will drop out of school at the end of the year. Omit the greatest common divisor, as a separate topic, and take only so much of the least common multiple as is required in the addition or subtraction of business fractions. Omit reduction and most of the operations formerly required under the head of compound addition, subtraction, multiplication, and division. Take only the parts that are actually used in ordinary business pursuits and in farm life. Bailey's Comprehensive Arithmetic will be useful to teachers.

SEVENTH GRADE OR YEAR.

The main work of this year should be percentage and its applications to the business method of commission and to simple interest. The incidental work should consist of geometrical exercises and measurements. A great deal of the work found under the preceding heads in many text-books may profitably be omitted. The concentration of effort should be to lead pupils, by means of simple inductive lessons, to a clear conception of principles. Children should be made to realize that all operations on business problems should be as accurately performed as if they were actual business transactions. The work in interest should be strictly limited to reckoning interest, omitting altogether the work found in many text-books under the head of "Problems in Interest"; e. g., to find the *time*, when the principal, interest, and rate are given, etc. Special attention should be given to drill in writing promissory notes, and the making out of bills.

Colonel Parker, in his *Talks on Pedagogics*, makes the following trenchant criticism on text-book work in "interest": "Of all subjects, within a few years, the subject of interest has been made the most mysterious, complex, and most confusing; still, the subject of interest

in itself is perfectly simple and easy. Bookmakers have crowded their terms of rate per cent, base, etc., upon us; and when the pupils come to it they suppose that they are coming to a brand-new subject, when the fact is, if the subject of number has been developed, there is nothing essentially new to learn in interest."

EIGHTH GRADE OR YEAR.

The work should include simple interest; profit and loss; commercial and bank discount, omitting "true discount," which is not used in common business affairs; simple proportion and square root. Cube root with analytical explanation should be omitted, except as limited to such simple exercises as may be done by inspection; e. g., cube root of 27; of 1728, etc. Exchange, stocks, and some other topics, still retained in many text-books, really belong to a commercial course. If the grade work is kept within reasonable limits, there will remain time to make a beginning of algebra, or of concrete geometry, or of both together.

A thoughtful and practical monograph on Geometry in the Grammar School by Professor Hanus, of Harvard University, will be of great value to teachers as a guide in the right direction. A few quotations will show the trend of his suggestions: "In the grammar school the knowledge value of a subject should never be subordinate to the disciplinary value. . . . Grammar school instruction in geometry should give preference to those topics which have a practical application in the ordinary affairs of life. In so doing special attention must be given to those propositions which can be established chiefly through observation, empirically; gradually the pupil must be led to undertake the easier deductive proofs. . . . In the presentation of the subject, the best results will be obtained only when the pupil has no text-book which contains the definitions and propositions. When geometry is not taught as it should be, not only shall we fail to achieve the results at which we aim, but we may even produce results the reverse of those desired." This book contains a detailed outline of

work for the work in geometry for the last three years of the grammar school.

BOOKKEEPING IN GRAMMAR GRADES.

By state law in some cases, and by city ordinances in others, bookkeeping is made a required study in connection with arithmetic as was "the casting of accounts" in times past. To a limited extent this is well enough, but there has grown up a tendency to convert the highest grammar grade into a commercial school. This plan is not the part of educational wisdom. Other and more important things ought not to be excluded by attempting to make boys and girls expert accountants.

President Eliot emphasizes this matter as follows: "I believe it to be the most useless subject in the entire program, for the reason that the bookkeeping taught is a kind never found in any real business establishment. . . . What a boy or girl can learn at school which will be useful in after-life in keeping books or accounts for any real business is a good handwriting, and accuracy in adding, subtracting, multiplying, and dividing small numbers. As trades and industries have been differentiated in the modern world, bookkeeping has been differentiated also, and it is, of course, impossible to teach in school the infinite diversities of practice."¹

RELATIVE VALUE OF ARITHMETIC.

During the greater part of this century, arithmetic was made the major study of the common schools, incidentally to learn how to "reckon," but mainly for the philosophical reason that it was supposed to give a better "mental discipline" than any other study. In a majority of the schools of to-day it is allowed more time than any other school study. But there is a general tendency towards *accuracy* rather than rapidity, *quality* rather than

¹ "Educational Reform" (1898).

quantity, *simplicity* rather than complexity, *business exercises* rather than schoolmaster's problems, and *clearness of ideas* rather than endless drudgery over wearisome exercises, problems in compound numbers, complex fractions, compound interest, compound proportion, and cube root. There is no shadow of doubt that this tendency will end in a general recasting of the order of presentation as found in the older school arithmetics, and in a still greater reduction of the time now devoted to the study which our forefathers made the most important pursuit of school life.

In many city courses of study, not only has the time given to arithmetical work been reduced from nine years to seven, but there has also been a great reduction in the quantity of arithmetic. Some of the time-honored topics formerly included in text-books have been eliminated, and others, though still retained in the books, have been dropped in practice. The latest type of the improved modern text-book is found in Baird's Graded Work in Arithmetic (1898), consisting of five small books, arranged in specific "Parts," one for each grade or year. Bailey's American Elementary Arithmetic for the first five grades is an excellent text-book, as is also the American Comprehensive Arithmetic, which follows it. There are several other new series of text-books, on a similar plan, all in the direction of educational reform.

HINTS AND SUGGESTIONS ABOUT ARITHMETIC.

Essentials. — The essential parts of arithmetic which pupils should understand are the four rules, common and decimal fractions, the tables of money, weights and measures with their practical application, percentage, and in-

terest. A great deal that passes in text-books under the name of arithmetic consists largely of conventional exercises, of no practical and of little disciplinary value.

Accuracy. — Pupils in the higher grades should be required to state not only *what* they do, but *why* they do it. They should test the truth and accuracy of their processes by *proof*, the only test they will have to rely upon in real business transactions. All grades should be trained to special accuracy in addition. One good exercise is to dictate a column of units to the class, the amount not to exceed 50 or 100; give ample time for every pupil to add the column upward and then downward; when every pupil gets the correct answer, the class is trained to accurate work.

Analysis. — Do not try to force upon young pupils demonstrations and analyses which are suitable only for older pupils. It is a marked defect in some school arithmetics that they are filled up with explanations and demonstrations. The explanations, if given at all, should be given orally by the teacher; they do not belong to a pupil's book, unless it is assumed that the teacher knows nothing whatever about the subject. Another marked defect, arising from limited space, is the too sudden transition from very simple questions to complex ones. The teacher should remedy, in some degree, this defect by substituting development exercises. Difficult problems, requiring sustained processes of reasoning, or complicated forms of analytical explanations, if used at all, should be given only to advanced pupils. In fact, what are termed "hard problems" do not come within the province of the common school at all, if, indeed, of any school.

Time. — The time devoted to arithmetic should not exceed four hours a week, and in primary grades it may be

reduced to two hours, or less. Most of the arithmetical work should be done in school.

Educational Reform. — Arithmetic when rightly taught is a means of promoting sustained attention ; of rendering the memory more tenacious by retaining the conditions of a question in mind during the solution ; and of cultivating, to some extent, the reasoning powers. To a certain extent, arithmetic is a business necessity. There are many teachers, however, and their number is rapidly increasing, who no longer rank arithmetic as the most important subject in the common-school course of study. These reformers recognize the practical need of knowing how to cipher, but they believe that the "mental discipline" acquired by a long-continued study of arithmetic is greatly over-estimated by the majority of school boards and school teachers. They insist that arithmetic should no longer be made the major study in school as it was in the days of our forefathers. They demand that a part of the time now given to this study should be devoted to better things.

Other Reforms. — This cutting down of time given to arithmetic is only one of several reforms now pressing upon us. The plain truth is that the grammar grades, including the last four years of the elementary school course, seem at present to form the most inflexible and non-progressive part of the entire public system, so far as the course of study is concerned. A flexible or an elective course exists in all state universities and technical colleges and in many of the higher institutions outside of the public school system. The high schools have in general at least two courses, a classical course and an English course, and some of them have a broader course of electives. The work in primary grades has been brought into

harmony with advanced methods and with modern psychological principles. But the grammar school stands alone as a monument of the past. In a few enlightened educational centers some slight modifications have been made, and that is about all.

One great barrier standing in the way of possible reform is the crowding of from 45 to 55 pupils into one room to be taught by one teacher. Here is what President Eliot says in his paper on the Grammar School of the Future, and every word of it is true: "It is obvious that the young woman with fifty or sixty pupils before her is attempting what no mortal can perform. . . . I suppose it is practicable for one young woman to hear the lessons out of one book of all the fifty children before her during the hours of the grammar school session. . . . But the new teaching is of quite a different character. To double the number of teachers would not be too much; for twenty-five or thirty pupils are enough for one teacher to grapple with. The individual requires teaching in these days, and no teaching is good which does not pay attention to the individual. We are coming to accept the doctrine that no teaching is good which does not awaken interest in the pupil. . . . But the American grammar school of the future will make that the rule which is now the exception—every child without special favor to get at the right subject at the right age and to pursue it as fast as he is able to travel."

Need of Some Common Standard.—All teachers are agreed that practical arithmetic should be taught in the elementary schools to the extent required by the demands of modern life. The unsettled point in question is the extent to which it shall be carried as a means of mental discipline. This point cannot be decided by discussion. It must be determined by careful examination and experiment carried on in a spirit of scientific investigation. It cannot be said, at present, that there is any fixed standard of attainment which is generally agreed upon by teachers, by school superintendents, or by other school officials. However, the reform is well under way, and the methods

of old-time schoolmasters together with the "sums" and "rules" of old-time text-books will become more and more uncouth, and finally disappear altogether. It certainly is educational barbarism to require pupils in rural schools or in city grammar schools to cram a course in arithmetic far in excess of the standard for admission into colleges and universities.

CHAPTER VIII

PSYCHOLOGICAL PRINCIPLES IN TEACHING ELEMENTARY HISTORY

THE value of history as a school study depends on the manner in which it is taught, and on what the term "history" is made to include. Not many years ago, when learning history meant the memorizing and reciting of the pages of a text-book, it is not to be wondered at that pupils found the subject uninteresting, and that teachers regarded history as of little educational value. But history is now made to include stories, tradition, myths, biography, and poetry in addition to formal text-book study. Instruction begins with stories and oral lessons, and is made an important part of regular grade work throughout the whole course. The Herbartians present history as a means of promoting patriotism, of fitting for intelligent citizenship, and above all, of moral training; in other words, as the chief means of forming character.

Oral Lessons in History. — Whatever instruction in history is given in the second, third, fourth, fifth, and sixth grades must, of necessity, be mainly by oral lessons. Perhaps the majority of teachers are unaccustomed to giving such lessons. This, however, is no reason why they should not fit themselves for the work by thoughtful practice. The training departments of state and city normal schools are now sending out annually large numbers of graduates well trained in this line of work, and many untrained teachers have the opportunity of visiting

their classes and learning their methods by actual observation. The school journals are full of lessons and suggestions in this direction. Moreover, there are several books recently published which outline in detail the history work that has been done by special teachers in the training classes connected with large normal schools. One of these is the *Special Method in History and Literature* by Charles A. McMurry, a book that is replete with common sense, and is imbued with a spirit of enthusiasm that can hardly fail to convince the most doubtful teacher of the value of oral lessons and the possibility of learning how to give them.

Moreover, to meet the needs of the new method of history teaching, there have been published within the last few years a large number of history stories for young children in the lower grades. Most of these inexpensive little books have been written by teachers experienced in teaching primary grades in public schools, and familiar with the wants and needs of children. These history sketches are fully in accord with the spirit of modern educational thought. They are psychological in method and interesting in style and illustration. Teachers can safely study them as models for their own oral lessons, or make use of them as supplementary reading matter in school.

The following outlines are suggestive only of beginnings, but their meagerness and simplicity can be supplemented by reference to the elaborate courses for the training classes connected with normal schools.

SECOND AND THIRD GRADES OR YEARS.

It may be well for a teacher inexperienced in giving

oral lessons to begin with a series of short talks in familiar homelike language about Columbus and his discovery of America; about Washington, his boyhood, his life as a surveyor, and his early experience in Indian warfare; and about Abraham Lincoln, as a study of the poverty and hardships of pioneer life in the valley of the Mississippi. "The oral treatment of such stories," says McMurry, "when the personal interest, energy, and skill of the teacher give the facts and scenes an almost real and tangible form — this oral treatment is the thing and the only thing to give a child the best start in historical study."

As an aid in this direction, teachers will do well to secure such inexpensive leaflets of biography as are found in *The Young Folks' Library*, consisting of short sketches of Columbus, Washington, and Lincoln; or in those in the *Werner Biographical Booklets*, such as the stories of Washington, Lincoln, Clay, Franklin, and Webster, written by Dr. James Baldwin. Teachers who think they cannot learn to tell such stories as these can at least make them lifelike by reading them to their pupils.

My own faith in the awakening power of oral lessons is made strong from my personal experience as a boy, as well as by my later experience as a teacher. My own interest in history began, when I was six or seven years old, with stories about the Revolutionary War told by my grandfather around the fireside on winter evenings. I well remember my boyish admiration for him as he told me how he ran away from home when he was only sixteen, to enlist in the Revolutionary Army. And right there, over the fireplace, was the old flint-lock gun that he brought back from the war. I also heard many stories of famous Indian fights, handed down by tradition, for my ancestors were New England pioneers. My oral lessons were learned outside of school, but in the true psychological method. When a little older, my interest in history was intensified by a book of *Stories About Indians*, which my father gave me. That book I read and re-read until I knew most of the stories by heart. This

method, also, was psychologically correct, but it was not then the school method. So lively was the interest thus excited that I asked the teacher to let me join a class of older boys who were studying history of the United States. It was the recollection of my unsatisfied longing at this time for more books to read, which led me, a quarter of a century afterwards, when State Superintendent of Public Instruction in California, to secure by the most strenuous efforts, after repeated failures, a state law which reserves a small percentage of the school moneys apportioned to each school district to be expended by the trustees and teacher in buying library books. Into these school libraries there are now going, annually, thousands of volumes of history stories, nature stories, and good literature for pupils and also books of reference for the use of teachers.

FOURTH GRADE OR YEAR.

After giving an oral lesson, question the children on the succeeding day to find out how much they remember about it. It may be well in this grade to let pupils begin to make notes of a very few important points. In country schools taught by only one teacher, when there are only two or three pupils in a grade, it will be advisable to put several grades together. It will be well, also, when the teacher is crowded for time, to let pupils take home some suitable history stories from the school library, if the school is provided with a library. In graded city schools, which are now quite generally provided with sets of history stories for supplementary reading, such books can be read in school to supplement talks by the teacher.

TOPICS FOR ORAL LESSONS.

Stories of the settlement at Plymouth by the Pilgrims, and at Boston by the Puritans.

Stories of the settlement of Virginia at Jamestown.

Stories of the settlement of Pennsylvania.

Stories about the settlement of the pupils' own state, city, or town.

Connect history with geography by locating on the map the places named in history lessons.

BOOKS FOR THE TEACHER'S DESK OR THE SCHOOL LIBRARY.

Stories of Great Americans for Little Americans.

Brookes' Stories of the Old Bay State.

Mowry's First Steps in the History of Our Country.

Clarke's Story of Cæsar.

Mara Pratt's American History Stories, Vol. I.

Guerber's Story of the Greeks.

McMurry's Pioneer History Stories. (This book is especially designed for schools in the Valley of the Mississippi.)

Wagner's Pacific Coast History Stories, Vol. I. (This book is specially designed for schools in the Pacific Coast States.)

Hittell's Brief History of California, Vol. I. Discovery and Early Voyages. (California Classes.)

FIFTH GRADE OR YEAR.

In this grade pupils may be required not only to put into their notebooks a few main points of topics presented, but also, occasionally, to write out a report of all they can remember in the form of connected narrative.

Topics for Talks. — The Settlement of New York. Stories about Washington, ending with an account of Braddock's Defeat. Stories about Benjamin Franklin. Story of Sir Walter Raleigh and his attempts at settlement. Settlement of the French in Canada. Settlement of the Spaniards in America. Conquest of Mexico by Cortez. The Indians of America. Stories of Indian Wars in connection with accounts of pioneer life.

Books for Teachers or for School Libraries. — The following books will be useful to teachers either as models of oral lessons, or as sources from which to make selections to be read to the class, and they will be useful in the school library for home reading by pupils: Swinton's First Lessons in our Country's History. Eggleston's Stories of Amer-

ican Life and Adventure. Guerber's Story of the Thirteen Colonies. Wright's Children's Stories of American History. McMurry's Pioneer History Stories. Montgomery's Beginner's American History. Johnston's Stories of Our Country. Dodge's American History Stories. Mowry's First Steps in the History of Our Country.

SIXTH GRADE OR YEAR.

In schools provided with sets of suitable history stories, oral lessons may be varied by selections to be read in class, or at home, and talked about in succeeding oral exercises.

TOPICS FOR LESSONS.

1. A more extended treatment of the four great centers of settlement in our country, namely: Massachusetts, Virginia, New York, and Pennsylvania.
2. Further accounts of the settlement of the children's own state.
3. Stories of the French and Indian War.
4. Stories of pioneer life in log cabins.
5. Common schools in colonial times.

Books for Teachers and School Libraries. — Eggleston's First Book in American History. Pratt's American History Stories, Vols. II and III. McMurry's Pioneer History Stories. Mowry's First Steps in the History of Our Country.

SEVENTH GRADE OR YEAR.

In many graded city schools, pupils in this grade begin to use some primary history of the United States, such as Swinton's, or Eggleston's, or Montgomery's, or Mowry's, either as a supplementary reader or as a text-book for the formal and regular study of the subject. In ungraded country schools, also, it is desirable, if practicable, that some primary book should be read or studied by pupils. But the use of a book should not be allowed to supersede altogether the oral lessons by the teacher. However,

the use of a book will mainly determine the order of topics. Teachers should now call in the aid of literature to reinforce history lessons by reading, for example, "Paul Revere's Ride," "Grandmother's Story of Bunker Hill Battle," "Lodge's Story of the Battles of Concord, and Lexington, and Bunker Hill." The life of Washington may be made the thread on which to string the events of the War of the Revolution. Short biographical accounts should be given of Franklin, John Adams, Jefferson, Putnam, Greene, Morgan, Sumter, and other American patriots.

Books for Teachers or for School Libraries. — Scudder's *Life of Washington*; Lodge's *Story of the Revolution*; Mowry's *First Steps in the History of Our Country*.

EIGHTH GRADE OR YEAR.

In the eighth grade, or in the eighth and ninth grades where the school course includes nine years or grades, the history of our country will be completed up to the present time. The manner of using the adopted text-book, whatever it is, must be determined by the judgment and skill of the teacher. John Fiske's *History of the United States* will prove useful, partly on account of its excellence as a schoolbook, and partly on account of the great value of the work of Dr. Hill in the way of topical analysis, suggestive questions and directions for teachers. As additional books of reference, use John Bach McMaster's *School History of the United States* (1897); also McMaster's *History of the People of the United States*, for reference.

HINTS AND SUGGESTIONS ON TEACHING HISTORY.

History and geography are correlative studies, and

skillful teachers will make each supplement the other. In this study, more than in most other elementary school branches, the teacher, by his skill, tact, and stores of information, can make the subject one of living interest.

Assignment of Lessons. — When an advance lesson is assigned, call attention to the leading points, and let pupils note them with pencil marks. A considerable part of the history is intended, not to be memorized, but only to be carefully read. If there are any reference books in the school library, or if pupils have any at home, suggest to the class some particular topic or topics about which they may find fuller information.

Selection. — Of the early discoveries treated of so fully in most text-books, single out three or four to be studied with care, and let the remainder be read at home or in the class. In the period of settlements, select the four great centers, namely: Virginia, Massachusetts, New York, and Pennsylvania. So in the Revolutionary War, single out a very few marked events and have them learned so that they cannot be forgotten. Dwell at length on events that happened in the pupil's own state.

Literature. — If the battle of Bunker Hill is the subject of a history lesson, read to your class the vivid picture of it in "Grandmother's Story of Bunker Hill Battle" by Oliver Wendell Holmes. If the battles of Lexington and Concord are included in the lesson, read "Paul Revere's Ride," and the story of these battles found in Lodge's "Story of the Revolution." When the battle of Gettysburg is reached, read Abraham Lincoln's Gettysburg Address and Bret Harte's "John Brown of Gettysburg."

Main Points. — Fix in the memory the causes and the results of the War of the Revolution, the War of 1812, the War with Mexico, the Civil War, and the War with Spain;

but do not attempt to make pupils remember the dates of many battles.

Chronology. — Do not attach much importance to chronological tables, except for reference. Fix in the minds of the pupils the dates of a few great events, and fasten them there by frequent reviews. A multitude of minor dates may be temporarily learned for to-day's lesson, only to be crowded into oblivion by to-morrow's recitation. "By means of history," says Montaigne, "the pupil enjoys intercourse with the great men of the best periods; but he must learn, not so much the year and the day of the destruction of a city, as noble traits of character; not so much occurrences, as to form a correct judgment upon them." A comprehension of the great events of history, of their causes, results, and relations, is more important than the verbatim memorizing of pages of text-books.

Method. — Questions for written examinations should be confined strictly to leading events and should include very few dates. In part, assign lessons by *topics*, and allow pupils to recite in their own language. Close the text-book yourself, and you will be better satisfied with the answers of pupils. Supplement the dry, condensed statements of the text-book by anecdotes, incidents, stories, and biographical sketches of noted men, drawn from your own memory or from books.

In his *Essentials of Method*, De Garmo sums up the serious defects in the teaching of history as follows: "History, like geography, records a wilderness of facts. If our analysis of right methods is correct, these facts should be grouped, not only so that they may be remembered, but so that the lessons they should teach may appear in the consciousness of the learner. This is true, not alone of the ethical lessons with which history always abounds, but also of the immediate ends for which men struggle. When the objective point for which a

war, a campaign, or a battle is conducted is once understood, it becomes a beacon-light by which the meaning of every movement may be examined. Historical facts are then vitally related and easily remembered. But to require an unthinking memorizing of facts, to impart a knowledge of whose rational connection and significance depends upon accident, and whose application never appears, is to pursue a method as unpedagogical as it is easy."

Outlines of the World's History. — There seems to be no good reason why pupils in the grammar school should not learn something about the history of the world. By means of oral lessons many thoughtful teachers are giving their pupils general outlines of the great events of the past. There are many more who would give such lessons were they authorized to do so by the course of study. There are many educators who would welcome the appearance of a small handbook of general history suited to the needs, not of high-school pupils, but of boys and girls in the highest grade of the common schools.

CHAPTER IX

NATURAL METHODS IN TEACHING GEOGRAPHY

THE following rough outlines of a course by grades consists chiefly of practical hints and suggestions about modern methods now generally pursued in teaching this subject.

SECOND AND THIRD GRADES OR YEARS.

Oral Lessons. — As no text-books are used by pupils in these grades, oral instruction must be given by the teacher. In accordance with psychological method, a beginning should be made by a study of that small part of the earth which children see daily at school or at home. Pupils should be taken to some good points of view near the schoolhouse and their attention directed to such natural divisions of land and water as they can there see. In this way pupils may be made familiar with hill, mountain, valley, plain, brook, river, etc. They can make a *real* study that will fill their minds with pictures which may afterwards be used in forming conceptions of things that are represented by pictures, or described in words.

The attention of pupils should be called to the phenomena of day and night, sunrise and sunset, the sun, moon, and stars, clouds, wind, dew, rain, frost, snow, and ice. This will set them to thinking about the causes of what they observe. They should begin to collect specimens of plants, and to learn the names of trees that grow in the neighborhood of the school. If there is a mill, or

factory or blacksmith's shop in the vicinity, the class should be taken on a visit to it. In rural schools, pupils should make out lists of all the food products grown on the farms of the neighborhood, lists of the birds in the vicinity, of the occupations by which the people earn their living, etc.

The importance of this kind of introductory teaching is emphasized by M. Elisee Reclus as follows: "Certainly we must always take as a starting-point what the child sees; but does he see nothing more than the school and the village? That is the tip of his abode; he also sees the infinite heavens, the sun, stars, and moon. He sees the storms, the clouds, the rain, the distant horizon, the mountains, the hills, the downs or simple undulations, and the trees and shrubs. Let him attentively notice all these things, and let them be described to him. This is *real* geography, and to learn the child has not to go beyond the things which surround him, and which are exhibited to him in their infinite variety."

Further than this, a few lessons may be given in connection with the school globe, showing the shape of the earth, the rotation of the earth, the continents and the oceans.

Helps for Teachers. — Among numerous good books for use by teachers there is one that reaches the high-water mark of modern elementary instruction in geography — Redway and Hinman's *Natural Elementary Geography*. Suggestive exercises for beginners will be found in *Geographical Nature Studies* by Frank Owen Payne, and in *McMurry's Special Course in Geography*.

FOURTH GRADE OR YEAR.

In this grade a Primary Geography is usually placed in the hands of pupils, though in some schools, the use of a text-book is postponed until the fifth year. The introductory pages of local geography will naturally be succeeded by special oral lessons on town, city, and state geography, and by an extension of the nature study begun in previous grades. Pupils should now begin to study maps and to draw rough outlines. The wall-maps

most needed for school use will be a county map, a state map, the United States, North America, and the hemispheres. A little modeling with clay or sand is desirable if conditions and surroundings are favorable.

The inductive lessons on home and state geography must soon be followed by a general view of the earth as a whole, its great natural divisions of land and water, its imaginary divisions, and some of its political divisions. The psychological or inductive method must be carried along with the logical or formal method. Pupils must now begin to pass from the home-world of direct perception to a broader world, pictured in imagination after a study of maps, descriptions, and pictorial representation. Teachers should take great pains in training pupils how to study text-book lessons. No intelligent teacher will follow the old method of requiring pupils to memorize in detached lessons, the entire text-book. There are some things in the text-book that should be memorized, but much of the text is only to be read, or to be used for reference. The skill of the teacher will be shown by a wise grouping of important things. The work to be done must necessarily be determined, in part, by the kind of a text-book in use.

Out-of-door Studies.—If possible, pupils should be taken on excursions to points of interest in the neighborhood, or the surrounding country. They must be shown how to study the plants and animals which they see with their own eyes ; to observe the farms, gardens, shops, factories, and the industrial pursuits of the people among whom they live. De Garmo says : "Geographical instruction must, above all, stimulate the creation of vivid mental pictures which shall come close to the reality. To awaken and to form pictures of the imagination must be

considered the great purpose of geography, however difficult the task may be."

Helps for Teachers—Redway and Hinman's *Natural Elementary Geography*.

FIFTH GRADE OR YEAR.

The study of local state geography should be a continuation and extension of the work of the preceding grade. In accordance with the arrangement of most textbooks, it will be advisable for the class to take up the study of North America as a whole, and of the United States as a whole, and by sections.

Map Drawing.—Special attention should be given to the proper study of maps, and to map-drawing. In general, blackboard map-drawing in the rough is better than labored drawings with pen or pencil. Map-drawing should not be made a hobby; kept within due limits, the exercise is good, but it often runs into a waste of time and labor. Let pupils draw upon the blackboard, from the open book, on a large scale, an outline map of their own state, and, if possible, of their own country. Then let them outline the grand divisions. Finally require them to outline off-hand, from memory. The school globe should be used to enable pupils to form a correct idea of the relative position on the earth of the continents and oceans represented on maps. Clay modeling if practicable.

What to Omit.—As school geographies are designed for use in all parts of our country, they are necessarily crowded with details to meet the wants of each state or locality. The sensible teacher will omit all that belongs to the local or special geography of states other than that in which the pupils reside. Do not expect children to

know more of a lesson than you remember without referring to the text-book. If you forget details, it is a sure sign that your pupils will forget them, and therefore it is best not to require such details to be learned at all.

If oral lessons in history are given to pupils, or if some book of history stories is used for supplementary reading, it is hardly necessary to suggest that all places of early settlement in our country, or other places marked by important events should be located on the map.

In addition to North America and the United States, it is desirable that there should be some study of Europe, on account of our commercial relations with European countries. Special attention should be given to the British Isles. If the Primary Geography is to be completed in this grade, a few general lessons will be required on South America, Asia, and Africa. For reference and reading, Carpenter's Geographical Reader—North America.

SIXTH GRADE OR YEAR.

In this grade pupils generally begin the use of the larger or complete text-book. Some attention must be given to the introductory lessons and to the outlines of mathematical and physical geography. The United States should be taken up by groups or sections.

Main Points.—Pupils are not expected to learn the boundaries of all the states nor even to name all the capitals. But they should be able at the end of the year to name the leading products of each group of states; to locate from two to five of the chief cities in each group, and to locate the chief rivers of commercial importance. Also to name the chief mountain ranges and the most impor-

tant rivers of the United States as a whole, and to name the leading industries of each group of states.

Special Topics. — The major topic of the class should be the geography of Europe. The following are a few among many special topics to be studied by pupils:

- (a) London, as the center of the world's commerce.
- (b) Glasgow, for building iron ships.
- (c) Manchester, as a typical manufacturing center.
- (d) Paris, the city of arts.
- (e) The scenery of Switzerland.
- (f) The scenery of the Rhine.
- (g) Rome and its architecture.
- (h) The Mediterranean Sea, its commercial and historical importance, etc.

SEVENTH GRADE OR YEAR.

The work in this grade should include a general study of Asia, Africa, South America, Australia, and the island groups of the Pacific. The main topics for Asia will be British India, China, and Japan; of Africa, the gold and diamond mines of South Africa, Egypt, the Nile, the pyramids, and ruined temples; of South America, the Andes, the Amazon, Brazil, Chili, Peru, and the Argentine Republic; of Australia, its peculiar animals and plants, its gold mines, and stock farms.

EIGHTH AND NINTH YEARS.

Some time should be given to a detailed study of the political geography of the United States. The main work should include a special study of physical geography, and of the commercial relations of different countries. Teachers will find *The Natural Advanced Geography*, by Redway and Hinman (1898), a desirable guide in teaching

geography in the seventh, eighth, and ninth grades, supplemented by any other modern text-books at hand.

HINTS AND SUGGESTIONS ON METHODS.

Value. — Geography is a treatment of man's material relations to the earth on which he dwells. It is an introduction to the political, industrial, commercial, and social relations of mankind. It is a medium through which pupils can be led into elementary science work. It is an important aid in the study of history. William T. Harris says, in the report of the Committee of Fifteen (1895): "About one fourth of the material relates strictly to the geography; about one half to the inhabitants, their manners, customs, institutions, industries, productions; and the remaining fourth to mineralogy, meteorology, botany, zoology, and astronomy."

Method. — During the past ten years there has been a marked advance in the general method of teaching elementary geography. In the latest school text-books the subject is introduced in a psychological manner, that is, by directing the attention of children to the phenomena of earth, air, and water, about which they already know something. Topography has been simplified, and more space is given to the industrial and commercial relations of mankind, and to the fauna and flora of the earth.

In criticising the common method of teaching geography, De Garmo says in *Essentials of Method*: "But perhaps the most serious fault of the current methods of teaching geography is, that the child is not taught to look within and beyond the individual fact he learns. The subject remains in its individual stage. There is no passing from individual to general notions, no application of geographical principles to new particulars. For this reason, no geographical fact appears to have more than a momentary and accidental relation to any other,

Facts are learned only to be forgotten, or to lie in the soul isolated and devoid of significance."

Essentials. — It is essential that teachers should keep clearly in view the main things which ought to be learned so well that they will be retained for life. These should be welded into a chain of relations and associations. For instance, it is important for pupils to connect history with geography by learning the geographical situation of places marked by events of great historical importance. It is evident that pupils should know the location of cities and countries most frequently mentioned in newspapers as they report the daily history of the world. It is evident that the geography of Europe is vastly more important than the geography of Africa, South America, or Asia. It is important to know something about the great trade centers of our country, such as New York, Chicago, Boston, Philadelphia, San Francisco, etc.; it is unimportant to know the exact location of Timbuktu, Haidarabad, Ujiji, or Chingtu.

Natural Science. — As about one fourth of the matter in school text-books on geography relates to botany, zoology, mineralogy, meteorology, and astronomy, it is evident that lessons in geography are closely connected with lessons in natural science. The disconnected facts as they appear in the description of the plants and minerals of different countries must be gathered into connected groups in the lessons on nature study. The correlation of geography and history is self-evident and needs only to be mentioned.

Examinations. — In schools where promotions from one grade to another are made by means of written examinations, the questions given by principals or superintendents will of necessity mainly determine the kind of

instruction which will be given by teachers. If the questions are chiefly on unimportant details, the teaching will run in that direction, and all hope of reform will be vain.

The Modern View. — In a recent paper read before a meeting of the Chicago school principals (1898), Colonel Parker said : " The most essential truth in modern psychology is the doctrine of apperception, which is that every image consists of an expansion and concentration of images already in the mind ; that fundamental images are gained through the senses ; and the function of the text-book is the union of such images into wholes. The best schoolhouse on earth is out of doors. Descriptions of things cannot take the place of actual contact with the reality. The line of progress in the future must have its root in out-door work. Field excursions have a stimulating influence. Children must see the animal in its habitat, the tree with its surroundings, must feel the earth under their feet. The history of the earth is written in its surface — erosion of river valleys, the making and mixing of soils, the washing of the surface, and countless other interesting and profitable problems are ours to study. A child must go through the same process eventually in arriving at truth as scientists do, though he may be so guided that his line of resistance is shorter, but human development has forever the same laws, and at the base of these laws is the great one of self-activity."

" It is extraordinary," says President Eliot, " what interest and training power are imparted to geography simply by the addition of one means, namely, photographs of scenery. There is no point in reference to the formation of plains and plateaus, of mountains and valleys, of lakes and rivers, which cannot be beautifully illustrated by photographs. I say, therefore, that the grammar school of the future will have within its walls a large assortment of models, charts, maps, globes, and photographs for the teaching of geography."

CHAPTER X

THE NATURAL METHOD IN NATURE STUDIES

NATURE study was begun in the schools of this country in the form of "object lessons," introduced from the schools of England. These lessons partook largely of English formalism. As indicated by the early text-books, the leading aim was to crowd great masses of "facts" upon children. In the Oswego normal school the method was made successful by Mr. Sheldon, and in the city of New York, by Mr. Calkins. But in the hands of unskilled teachers object lessons often became a dead formalism. Still they led up to nature study which, during the past ten years, has been so generally pressed upon the attention of teachers.

The desirability, not to say the necessity, of beginning in the earliest years of school life some course of instruction in nature study is now generally recognized and acted upon. It is impracticable to mark out definitely any course adapted to the diverse conditions of different schools.

One teacher will make a special study of plant life; another, of animal life; a third may choose metals and minerals; a fourth, physics. Whatever line of work is taken will prove profitable, if it is patiently carried out in a spirit of scientific observation and investigation. The elaborate courses that are successfully carried out in the small classes of normal training schools will fail in the crowded classes of city primary schools. The needs of a

small country school having all grades of pupils and only one teacher are widely different from the wants of city classes. All that I purpose to do, therefore, is to offer a few hints, and make a few rough outlines which may possibly be of some use to teachers that attempt to lead their pupils in the paths of nature study.

FIRST AND SECOND GRADES OR YEARS.

From some suitable book on nature study select a few lessons and read them to the children, or better still, learn the lessons and tell the story in your own words. In season, plant in flower-pots a few sweet-peas, beans, and grains of wheat, etc., and let the children watch their growth. Give, occasionally, an object lesson on fruits and flowers. If you take the *Primary School Journal*, select from it such exercises as you find available. Start conversation lessons about frogs and fishes. If possible, take the children where they can see live frogs and fishes in their native element.

Within the last few years, there have been published large numbers of nature stories and nature studies, designed to meet the needs of children in primary grades. They have been written, in general, by teachers engaged for years in instructing young children. They are charming in style and in illustration. They are also psychological in general method. Secure some of these inexpensive books and study them as models for your own oral lessons. If you have little or no time for preparing oral lessons, begin your work by reading short extracts from some one of these books. In time you will become interested in your work, and will make up your own exercises.

THIRD AND FOURTH GRADES.

Plant Life. — Ask the children to plant at home, in flower-pots, boxes, or garden beds, peas, beans, wheat, and corn. Ask them to make a memorandum of the date of planting, and of the date when they come up, and report in writing to the teacher. Then ask them to make, once a week, a rough drawing of the appearance of each plant, and hand it in to the teacher. It will add to the interest of this lesson if the teacher will plant a few of the same kinds of seeds, dig up one, from time to time, and show pupils the progress of germination. Take into school specimens of plants, leaves, and flowers, distribute them to pupils, and show them how to make a study of them. Let pupils begin to make rough outline sketches of leaves, plants, and flowers from objects. The teacher's desk should be supplied with an inexpensive magnifying glass, to be used by pupils, or children should be encouraged to buy glasses for themselves. Set the pupils to observing forms of plant life in the gardens and fields. Ask them to bring in lists of all kinds of trees they can find, etc.

The teacher will do well to use as a handbook, Bailey's *First Lessons with Plants*. In this little volume, Professor L. H. Bailey, of Cornell University has fully sustained his reputation as the author of numerous books on horticulture and agriculture, and of the school bulletins on plant life that have been so widely distributed among the common schools in the state of New York. In his preface to this book the author remarks that the lessons are designed to awaken an interest in plants and in nature rather than to teach botany. When the teacher thinks chiefly of his subject, he teaches a science ; when he thinks chiefly of the pupil, he teaches nature study. Mr. Bailey sets forth four chief requisites in nature study if the pupil is to catch inspiration from it :

“(1). The subject itself must interest the pupil. This means that the

instruction begins with the commonest things, with those which are actually a part of the pupil's life.

"(2). The pupil must feel that the work is his, and that he is the investigator.

"(3). Little should be attempted at a time. One thought or one suggestion may be enough for one day. The suggestion that insects have six legs is sufficient for one lesson. We obscure the importance of common things by cramming the mind with facts. When the pupil is taught to take systematic notes upon what the teacher says, it is doubtful if the lesson is worth the while, as nature study.

"(4). The less rigid the system of teaching and the fewer the set tasks, the more spontaneous and, therefore, the better, is the result. A codified system of examinations will choke the life out of nature study."

Animal Life. — Observation studies on bees, or ants, or butterflies, first, at home, or in field or garden; afterwards, in school. In season, secure a few cocoons and let the children watch the transformation of the chrysalis into a butterfly. In tadpole season, ask the boys to catch a few polliwogs and bring them to school in a glass jar filled with water. Then set the whole class on the watch to see the wonderful transformation of the tadpole into a frog.

Miscellaneous. — Take incidental lessons on various kinds of fruits, in season; on the thermometer and the weather changes of heat and cold, rain and snow, winds and clouds, etc. On the moon and its phases; on iron, gold, and coal, etc. Rough outline drawings of suitable objects under investigation. Read to pupils nature stories from selected books, and afterwards lend the books to the children. If possible, take your class out into city parks or country fields and woods to study nature at first hand.

FIFTH AND SIXTH GRADES.

Plant Life. — Special study of a few common wild flow-

ers, such as: the violet, buttercup, and wild rose; of the blossoms of fruit trees, such as: the apple, peach, pear, and plum; the growth of plants, etc. As a handbook use Bailey's First Lessons with Plants.

Animal Life. — Typical specimens of radiates and mollusks, such as: the star-fish, the clam, or the oyster; insect life, such as bees or ants; bird life, as shown by the birds of the neighborhood.

Metals and Minerals. — Short lessons on common rocks such as granite, sandstone, marble, slate, etc.; metals such as iron, copper, lead, etc. Encourage pupils to begin the collection of a school cabinet. Observation lessons in connection with geography.

Physiology and Hygiene. — Rules of health in respect to wholesome food, pure air, and personal cleanliness. Effects of narcotic and alcoholic stimulants.

SEVENTH TO NINTH GRADES.

Plant Life. — As a guide to pupils who are to be put to a real study of nature, the teacher will do well to use Bailey's Lessons with Nature, which is the larger book of which the First Lessons is an abridgment. For use in rural schools and as a library book this volume is unequaled. The preface is in itself a good manual of suggestions.

In connection with geography, the teacher can take up occasional lessons on the distribution of plant and animal life on the globe. The wise teacher will be in no haste to begin technical botany by classifying plants. First in order of study comes empirical knowledge; afterwards scientific knowledge and nomenclature. Beginners store up facts by items, often in an indirect and desultory

manner. Mere text-book study of natural science, without observation and experiment by the pupils, is not knowledge. The real guide to true knowledge is a *habit of observing*. Agassiz says, "The difficult art of thinking, of comparing, of discriminating, can be more readily acquired by examining natural objects for ourselves than in any other way."

Physics. — The extent to which elementary lessons in physics can be carried depends upon conditions, but something can be done in any school. Experiments can be made with the simplest kind of improvised apparatus. Encourage pupils to make simple experiments at home or by themselves.

Physical Geography. — Climatic zones and their effect on the distribution of animal and vegetable life. The sea and its inhabitants. Ocean currents and their effect on climate.

Real Work. — By well-put questions, set pupils to observing the habits of animals and birds, of ants, bees, wasps, flies, and butterflies. Persuade them to buy a magnifying glass or a cheap microscope, and begin examining things for themselves. If you wish to succeed, you must do the actual work of the naturalist, and must make your pupils do it. You must fit yourself to do this work by taking an interest in it. It is not at all necessary that you should be a specialist in botany, zoology, or natural philosophy; but it is essential that you should know something about the true methods of the specialist. Taken up in the right spirit, instruction in the natural sciences can be made one of the most effective means of education.

"The first teaching a child wants," says Huxley, "is an object-lesson of one sort or another; and as soon as it is fit for systematic

instruction, it is fit for a modicum of science. If not snubbed and stunted by being told not to ask foolish questions, there is no limit to the intellectual craving of a young child, nor any bounds to the slow but solid accretion of knowledge, and the development of the thinking faculty in this way."

Charles W. Eliot says in the *Unity of Educational Reform*: "Into the curricula of schools and colleges alike, certain new matters have of late years been introduced, for teaching which the older methods of instruction—namely, the lecture and the recitation—proved to be inadequate, or even totally inapplicable. These new matters are chiefly object-lessons in color and form, drawing and modeling, natural sciences like botany, zoology, chemistry, physics, mineralogy, and geology, and various kinds of manual training. In school and college alike the real effective teaching in all these subjects is that which is addressed to each individual pupil. The old-fashioned method of teaching science by means of illustrated books and demonstrative lectures has been superseded, from the kindergarten to the university by the laboratory method, in which each pupil, no matter whether he be three years old or twenty-three, works with his own hands and is taught to use his own senses."

Nature Study for Grammar Grades (1899), by Wilbur S. Jackman of the Department of Natural Science, Chicago Normal School, is an invaluable book for teachers that desire to undertake substantial practical work. The author in his preface sets forth general principles worth keeping clearly in mind. "That pupils need some rational and definite directions in nature study, all are generally agreed. But to prepare the outlines and suggestive directions necessary, and to place these within the reach of each pupil, is more than the ordinary teacher has time to do, even granting that she is fully prepared for such work. With a manual of directions in hand, each pupil may be made responsible for a certain amount of work, either in the field or in the laboratory. The author would suggest that the teacher assign a certain topic and then give appropriate opportunity for the pupils to study it, either in the field or in the laboratory, along the lines suggested in the book. After such study, the pupils will be prepared to meet in general class discussion, and the subsequent steps, drawing, painting, modeling, writing, etc., may follow in proper order."

Helpful Books for Beginners.—Burt's *Little Nature Stories* for Little People; Morley's *Seed Babies*; Deane's *Little Talks About Plants*;

Burt's Nature Stories—Plant Life and Animal Life; Bailey's First Lessons With Plants; Herrick's Chapters on Plant Life; Kirby's Stories About Birds; Miller's Little Brothers of the Air; Andersen's Stories Mother Nature told her Children; Strong's All the Year Round, Four Parts—Spring, Summer, Autumn, Winter; Johonnot's Feathers and Fur, and Claws and Hoofs; Kelly's Short Stories of our Shy Neighbors.

Helpful Books for Grammar Grades.—Bailey's Lessons with Plants (1898); Herrick's Chapters on Plant Life; Needham's Outdoor Studies; Burt's Birds and Bees (from John Burroughs); Newell's Reader in Botany, Vols. I and II; Scudder's Life of a Butterfly; Seaside and Wayside Series, Vol. III (for 4th and 5th Grades); Vol. IV (For 5th to 9th Grades); Dana's Plants and their Children (7th to 9th Grades).

Reference Books for Teachers in Graded Schools. Mrs. L. L. Wilson's Nature Study in Elementary Schools; Boydon's Nature Study by Months (1898); Jackman's Nature Study in Grammar Grades (1889); John Muir's Mountains of California; E. S. Thompson's Wild Animals that I have Known.

CHAPTER XI

MODERN VIEWS ON PHYSICAL CULTURE

ONE of the most hopeful features of modern education is the growing recognition of the importance of physical training. It may be true that the leading purpose of the public school is intellectual training. It must be admitted that the physical condition of children depends, in part, upon home surroundings and inherited constitution. But though teachers have no direct control over pupils in respect to diet, clothing, exercise, rest, sleep, work, or play, they must not, on that account shirk their appropriate share of responsibility in relation to the health and physical development of school children.

Negative Duties. — There are certain negative duties which are self-evident. Teachers should at least protect their pupils against impure air, too long confinement, overwork, and the deadening effects of mental worry, caused by severe competitive written examinations. A great deal more than this ought to be done ; but in many schools not even this is attempted. Nevertheless it is the duty of teachers, whether in the primary, grammar, or high school, whether in city or country, to impress upon pupils, by emphatic iteration, the laws of health in relation to food, air, cleanliness, sleep, rest, exercise, play, work, and personal habits in general. President G. Stanley Hall, of Clark University, says in a paper on child study :¹

¹ *The Forum*, Dec., 1893.

"The juvenile world now goes to school and has its brain titillated and tattooed, and we have entirely forgotten that men have been not only good citizens but great, who were in Idyllic ignorance of even the belauded invention of Cadmus. Now, if this tremendous school engine, in which everybody believes now with a catholic consensus of belief perhaps never before attained, is in the least degree tending to deteriorate mankind physically, it is bad. Knowledge bought at the expense of health, which is wholeness or holiness itself in its higher aspect, is not worth what it costs. Health conditions all the highest joys of life, means full maturity, national prosperity. May we not reverently ask, What shall it profit a child if he gain the whole world of knowledge and lose his health, or what shall he give in exchange for his health? That this is coming to be felt is seen in the rapidly growing systems of school excursions, school baths, school gardens, school lunches, provisions for gymnastics of the various schools, medical inspection, school polyclinics, all of which have been lately repeatedly prescribed and officially normalized. Not all, but many of these, are quite new. The assumption is that all must be judged from the standpoint of health, and that an educational system must make children better, and not worse, in health."

Systematic Drill. — It is sometimes said that systematic drill soon becomes irksome to children; that boys dislike the gymnasium, and that girls find calisthenics wearisome; that it is not natural for children to use wands and dumbbells; and that boys and girls should be left to follow their own inclinations and impulses about exercises and amusement. Now school drill is designed not to supersede, but to supplement, the natural games and plays of children. In mental training, we recognize the principle that intellectual development is attained only by repeated, long-continued, and systematic exercises. Mental school gymnastics are rigidly enforced for many years. The same law holds true in physical development. Would not the physique of a class of boys under gymnastic training for ten years be superior to that of a class left to run wild? And would not their accumulated stock of trained mus-

cular power be quite as serviceable to them through life as a great deal of what is called mental discipline? All the world's best workers know that success depends largely upon sound health and power of endurance. Sinewy frames as well as trained minds are essential to the sons of workingmen who have to make their own way in the world. For them muscular power means food, clothing, and a living. Their only capital in the struggle for existence is an elementary education and a sound body. "Health is the first wealth," says Emerson.

Practical Suggestions. — In every school, whether in city or country, there should be given a daily drill of five or ten minutes in free gymnastics. Without apparatus and without music, a skillful teacher can secure very good results from what are termed, "free gymnastics," executed by counting in time. To these there may be added "breathing exercises," and concert exercises in vocal culture or in singing. Both wands and dumb-bells can be used in any schoolroom. If there is a piano in the schoolroom, the light gymnastic drill can be made quite varied and thorough with no other appliances.

Athletics. — The man who understands boys will either join with them, or will encourage and direct them in their games of baseball and football; in boating, swimming, skating, coasting, and snowballing; and will take an interest in their games of marbles, in kite-flying and top-spinning. On pleasant Saturdays, or after school in the long summer days, he will take his pupils on excursions in the fields, woods, or hills after collections for the cabinet, or to see nature, or merely to have a good time. The woman who understands little children will invite them to pleasant walks with her for the same purpose.

Games and Plays. — The games of the primary children must not be forgotten. By a little attention to the playground, their sports may be regulated and made delightful. Marbles, tops, kites, balls, and hoops are all a part of educational apparatus. A visit to a kindergarten and a careful study of some kindergarten manual will be very suggestive in the direction of play and amusements. Teachers must study variety, for monotonous repetition soon becomes distasteful. Notice how marbles succeed tops, and kites follow ball, as often as the moon changes. The indirect lessons of the playground are often more valuable and more lasting than the formal teachings of the class-room. For it is in the hours of play, when off duty, that the teacher can best win the confidence and love of children.

"From a health point of view," says Francis H. Tabor, "There can be no comparison between a good healthy game — in which every muscle is suitably exercised, and brain and lungs join in the complete happiness of the honest laugh and the careless shout — and the "dead alive" military drill, or formal gymnastics, which, while developing many muscles abnormally, leave the brain torpid and the spirit depressed. But the game must be regulated, if its full benefits are to be reaped. Unselfishness must be practised at every turn; the strong must help the weak; and the weak must be aroused, that they may not be a drag upon the strong. . . . The code of honor among true sportsmen is so rigid that truth and fair dealing become as important as a well-balanced bat or sound ball. Manliness, energy, courage, endurance, all follow, not because they are *said* to be good, but because they *seem* to be good and are *felt* to be absolutely essential to the attainment of an object that is all in all to the boy." ¹

Manual Training as an Educational Factor. — The recent introduction of manual training into city schools marks a very important step in advance. The pioneer

¹ *The Forum*, May, 1899.

AM. PUB. SCH. — 19.

schools of manual training were founded and endowed by wealthy business men who desired to supplement the elementary education of the public schools by affording boys a technical training which would enable them to earn a living. The success of these schools attracted the attention of public school officials, and experiments were made by organizing classes, first in high schools and afterwards in the higher grades of grammar schools.

Plan. — The plans, as carried out in Boston, Chicago, New York, Philadelphia, San Francisco, and many other cities, involve the introduction of woodwork, cooking, and sewing in the higher grammar grades, two hours a week being given to each subject. In 1896 manual training was an essential feature in the public school course of ninety-five cities. In the beginning, manual training was urged mainly as a special preparation for some industrial pursuit, but now it is advocated as an important factor in a general education. Training in the use of tools in the shops leads to mental habits of careful attention. It leads to interest in drawing and the practical application of arithmetic and geometry. Indeed it seems to be doing for the grammar and the high school what kindergarten training does for the little children.

"The best education has come from contact with nature," says Earl Barnes. "It is absurd to say that Abraham Lincoln was uneducated because he did not have the advantages of the schools. He was educated for the work of his life, even if most of his clay work was done with a hoe, his wood work with an ax, his physics with a crowbar. A face-to-face struggle with nature has given the best men of the country to-day."

The Report of the Commissioner of Education (1896-97) says: "Strong opposition was met among school-

men for a time, but manual training has steadily grown in popularity, and, with its growth, it has constantly improved in matter and method, and consequently in usefulness." In this Report the statistics and courses of instruction are given of 66 manual and industrial training schools and 24 industrial schools for Indian children.

On the pedagogical value of manual training Professor William James, of Harvard, writes in a recent article as follows:¹

"The most colossal improvement which recent years have seen in secondary education lies in the introduction of the manual training schools; not because they will give us a people more handy and practical for domestic life and better skilled in trades, but because they will give us citizens with an entirely different intellectual fiber. Laboratory work and shop work engender a habit of observation, a knowledge of the difference between accuracy and vagueness, and an insight into nature's complexity and into the inadequacy of all abstract verbal accounts of real phenomena, which once wrought into the mind remain there as life-long possessions. They confer precision; because if you are *doing* a thing, you must do it definitely right or definitely wrong. . . . They beget a habit of self-reliance; they keep the interest and attention always cheerfully engaged, and reduce the teacher's disciplinary functions to a minimum."

¹ *Atlantic Monthly*, March, 1899.

CHAPTER XII

MODERN TRAINING IN MORALS AND MANNERS

WHILE intellectual training is made, in practice, the most prominent object of the public school, the importance of moral training is universally acknowledged. "The vital part of human culture," says William Russell, "is not that which makes a man what he is intellectually; but that which makes him what he is in heart, life, and character."

Indirect Training. — Now there is no doubt that the strict discipline of the public school is in itself a powerful means of indirect moral training. Pupils are trained to habits of order, silence, regularity, punctuality, industry, truthfulness, obedience, and a regard for the rights of others. The influence of school, continued for a series of years, in these respects, is very powerful in the formation of habit and character. But beyond these incidental and indirect results, what is it possible for the schools to accomplish in the way of moral development?

There are some who believe that there can be little or no moral culture unless it is given in connection with authoritative religious instruction in creed or catechism. But at present in our public schools, by law or by custom, purely secular instruction is the rule; religious exercises, other than the reading of the Bible, are the exception. In so far, then, as moral training is connected with religious instruction, the matter must be left to the home, the Sunday-school, and the church. What remains to be

done in the public school, and how shall it best be accomplished? While there are many who seem to think that nothing whatever can be done, except indirectly, there are others who believe that much may be accomplished by direct training and instruction.

Motive. — If moral training consisted merely in telling children what is right or wrong, or in dealing out maxims and proverbs; if it would make children truthful and honest to learn commandments by rote, — then the teacher's task would indeed be an easy one. But moral culture concerns the feelings, the emotions, the will, the conscience. Hence the successful teacher must be a trusted friend and guide, not a mere bundle of philosophical ethics. The moral nature must be called into daily exercise until habits of right-thinking result in habits of right-doing. And this process of development is slow and almost imperceptible.

"Whatever moral benefit can be effected by education," says Herbert Spencer, "must be effected by an education that is emotional rather than perceptive. If, in place of making a child understand that this thing is right and the other wrong, you make it feel that they are so; if you make virtue loved and vice loathed; if you arouse a noble desire and make torpid an inferior one; if you bring into life a previously dormant sentiment; if you cause a sympathetic impulse to get the better of one that is selfish; if, in short, you produce a state of mind to which proper behavior is natural, spontaneous, instinctive — you do some good."

Methods. — Methods of conducting moral lessons in school must be gathered up by experience and observation. A warm heart, a genial nature, an even temper, a beaming eye, a cheerful countenance, a sincere voice,

an earnest manner — these are the potential agencies by which you can win, direct, and control young pupils. Teachers should keep fresh in mind their own feelings, passions, emotions, impulses, sympathies, and experiences when they were children, and thus avoid the grievous mistake of applying to school children the moral philosophy suited only to adult metaphysicians. Children should not only be *taught* what is right; they must also be made to *do* what is right. The school is a miniature world; in one way or another it affords opportunities for the practice of most of the moral virtues. Strict discipline trains pupils to habits of obedience and order, corrects bad habits, and compels the lawless to respect the rights of others; but in addition to this it is possible for a teacher to breathe into a school a spirit of honor, truthfulness, and honesty which will put down profanity, vulgarity, slang, slander, tattling, lying, and meanness generally.

Stories and Books. — One of the most effective ways of giving moral lessons is by reading or telling to pupils stories or anecdotes illustrating some virtue to which the teacher desires to call attention; such as honor, truthfulness, courage, or honesty. "Stories of great and noble deeds," says Bain, "have fired more youthful hearts with enthusiasm than sermons have." If there is a school library, make good use of it by calling the special attention of pupils to the biographies and story books that you think best fitted to become your assistants in moral development. The high ideals presented in good books will result in a rich harvest of noble sympathies and right actions. Weems' *Life of Washington* was one of the few books that fell into the hands of Abraham Lincoln when he was a boy living in a log cabin; who can estimate the

high ideals which this patriotic book, in spite of its exaggerated rhetoric, suggested to this solitary boy, as he pored over it by the light of the open fireplace? Though Lincoln owed little to school training, we cease to wonder at his character-development when we know that he read and re-read, at home, in early life, a select library consisting chiefly of the Bible, *Pilgrim's Progress*, Plutarch, Washington, spelling book, reader, and arithmetic, and an old volume of the statutes of Illinois.

Dr. George H. Martin, of Boston, in his unequaled address on "The Unseen Force in Character Making," said:¹ "Our boys and girls, all unknown to us, often unconsciously to themselves, are admiring the characters they find in the books they read, and are fashioning themselves into the same image. Through literature and history, there is no limit to the possibilities within the reach of every teacher. Character in history, character in literature, illuminated in the portrayal by the enthusiastic admiration of the teacher, glows before the student and kindles within him a responsive emotion. As the long line of men and women who have lived, and wrought, and suffered moves before him, he feels nobler impulses stirring within him, and sees himself living such a life, and with the thoughts and impulses, the work of transformation begins."

One of the most valuable books for use by teachers of the higher grammar grades, or by teachers of country schools, is Thayer's *Ethics of Success*. It is the special excellence of this book that the moral lessons are not sermons or lectures, but inspiring anecdotes from the lives of successful men and women.

¹ Read at Columbus; published in the *Journal of Education*, March 16, 1899.

History.— By the new school of Herbartians, great stress is placed on history as a means of moral culture. The general term history is made to include, not only the formal text-book study of history, ancient and modern, in the higher grades, but, also, fables, myths, stories, tradition, biography, and poetry, for children in the lower grades.

In McMurry's General Method, a book based on the principles of Herbart, the use of history in moral training is set forth as follows: "Although history has many uses, its best influence is in illustrating and inculcating moral ideas. It will strike most teachers with surprise to say that *the chief use of history study is to form moral notions in children*. Some of the best historical materials (from biography, tradition and fiction) should be absorbed by children in each grade as an essential part of the substratum of moral ideas. . . . Examples of moral action drawn from life are the only things that can give meaning to moral precepts. Moral ideas always have a concrete basis or origin. Some companion with whose feelings or actions you are in close personal contact, or some character from history or fiction by whose personality you have been strongly attracted, gives you your keenest impressions of moral qualities. To begin with abstract moral teaching, or to put faith in it, is to misunderstand children."

De Garmo, in Essentials of Method, emphasizes the uses of history as follows: "For the reason, then, that we first grasp the general through the particular, all ethical instruction should proceed from individual cases of action involving a moral content. Hence it does not suffice to preach in school, except from the text of an actual event. Children can best get the first points of crystallization for moral truths from stories involving a moral content. Here the emotions are not unduly aroused, as they are likely to be where the action is one that touches them personally, so that the irrational nature of wrong action appeals to the understanding as well as to feeling. History fulfills its noblest mission to the race on account of its ethical content and of the individual nature of the presentation. Every deed of heroism, of benevolence, of charity, of patriotism is a concrete embodiment of a precious virtue; while every mean, cowardly, dastardly act is an individual protest against meanness, cowardice, or villainy.

We can only continue the deposit about these starting-points until at last the soul is strong in itself to stand against temptation."

Occasions. — Talks on morals should be given at the proper time and in the right way. The events of a school week will often furnish practical illustrations for a short but effective talk to the pupils on manners or morals. Omit no fitting occasion to impress a principle upon the moral feelings.

Kindergarten Training. — It will be well for all thoughtful teachers to consider what has been accomplished in kindergarten schools in the way of molding the characters of little children, and of reforming the waifs gathered in from neglected homes. The annual reports of the Golden Gate Kindergarten Association written by the late Mrs. Sarah B. Cooper, the philanthropist of San Francisco, are filled with proofs of the possibilities of moral training at a very early age. In one of her reports (1891), she says :

"During the twelve years we have had nearly nine thousand children under our care and training. The children who were with us in the earliest years of our work are now from fifteen to eighteen years of age. We have followed these children as closely as possible since they left us, and after the most rigid investigation we do not find our kindergarten children among the juvenile offenders. Their names are not to be found upon the police records ; and this, too, in face of the fact that our kindergartens are located in the districts where criminals are made. We have perused every avenue of information, only to find one arrest for petty offenses among the 8,000 children that have attended the kindergartens during the last eleven years — and as he was a feeble-minded boy, with an inborn mania for setting fire to things, we counted him out entirely. He was deemed irresponsible, and placed in confinement to keep him from mischief."

A Teacher's Testimony. — The following letter was written by Agnes M. Manning, who has been for many

years principal of one of the largest primary schools of San Francisco, in answer to a letter of inquiry from myself when City Superintendent of Schools :

DEAR SIR: I wish to tell you why I am so strongly in favor of kindergartens. My school is in a crowded neighborhood. I have many children from tenement-houses and from the narrow streets off Market street. Before the days of the kindergarten these children as soon as they could crawl, spent their waking lives on the sidewalks. From the age of two to six years they pursued the education of the street. The consequences were that at six they came to us with a fund of information of the worst description, and a vocabulary that might excite the envy of the Barbary Coast. At the commencement of each new year they tumbled over each other in their rude haste to take up the unexplored life of a school. They were in tens, fifties, hundreds in our yards. The novelty being past, the hard struggle commenced of keeping them from joining the army of truants, and leading them into habits of work and cleanliness. . . . The kindergartens have changed all this. They have taken the babies that used to be consigned to the curbstone, trained and guided them along a path of development. They have wisely attempted no cramming of the infant brain with premature scholarship. They have surrounded the young lives with a fresh atmosphere. They have passed the hours in pleasant games, taught a purer language, and led the little feet into a new civilization. The children of tenement-houses and narrow streets still come in tens, fifties, and hundreds to begin life in a new school at the beginning of each school year. The little ones are clean, self-respecting, eager for knowledge. They have opinions of their own on many things, and are quite anxious to express them. They neither know how to read nor write. They have been taught to see, to observe, to tell about what they see and hear. They have been taught to respect older people, to be honest, to tell the truth. It is a rare thing now to find a child that does not know it is wrong to steal. If you meet one you may be sure he has never been in a kindergarten."

Character. — The exercise of good principles, confirmed into habit, is the true means of forming a good character. Children do not learn arithmetic and grammar merely by

repeating rules and formulas ; neither will they apperceive and assimilate the foundation principles of right and wrong as rules of action merely by the process of repeating mottoes and maxims. The moral faculties are of slow growth ; they need daily culture and exercise until habits of right-thinking and right-doing are formed. There are evil tendencies in the child's nature to be repressed ; there are germs of good qualities to be warmed into life and quickened in their growth. Canon Farrar says : " Plant a fleeting fancy and you reap a thought ; plant a thought and you reap an action ; plant an action and you reap a habit ; plant a habit and you reap character ; plant a *character* and you reap a *destiny*."

The practical teacher who has begun to make a direct study of children at first hand will find occasion to make use of the doctrine of *interest* and *desire* as set forth by the Herbartian school of thinkers, as well as the creed of *duty* and the *will* expounded by the Hegelian school of philosophers. In the kindergarten and the primary grades children will be won by sympathy, influenced by desire, and stimulated by interest. In succeeding stages of development, as good habits are strengthened, and higher ideals are created, character begins to be formed, conscience is developed, and duty becomes more and more a controlling power.

"The development of the character," says Dr. Jordan, "is the formation of the ego. It is in itself the co-ordination of the elements of heredity, the bringing into union of warring tendencies and irrelevant impulses left us by our ancestors. The child is a mixture of imperfectly related impulses and powers. It is a mosaic of ancestral heredity. Its growth into personality is the process of bringing these elements into relation to each other.

"Doing right becomes a habit if it is pursued long enough. It becomes a second nature or a higher heredity. The formation of a

higher heredity of wisdom and virtue, of knowing right and doing right, is the basis of character-building."

William T. Harris, United States Commissioner of Education, closed a paper, read before the California State Teachers' Association (1896) with the following summary :

"In closing, let us call up the main conclusions and repeat them in their briefest expression.

"1. Moral education is a training in habits, and not an inculcation of mere theoretical views.

"2. Mechanical disciplines are indispensable as an elementary basis of moral character.

"3. The school holds the pupil to a constant sense of responsibility, and thereby develops in him a keen sense of his transcendental freedom ; he comes to realize that he is not only the author of his deed, but also accountable for his neglect to do the reasonable act.

"4. Lax discipline in a school saps the moral character of the pupil. It allows him to work merely as he pleases, and he will not reinforce his feeble will by regularity, punctuality and systematic industry. . . .

"5. Too strict discipline, on the other hand, undermines moral character by emphasizing too much the mechanical duties, and especially the phase of obedience to authority, and it leaves the pupil in a state of perennial minority. He does not assimilate the law of duty and make it his own. The law is not written on his heart, but is written on lips only. He fears it but does not love it.

6. The best help that one can give his fellows is that which enables them to help themselves. The best school is that which makes the pupils able to teach themselves. The best instruction in morality makes the pupil a law unto himself. Hence, strictness, which is indispensable, must be tempered by such an administration as causes the pupils to love to obey the law for law's sake."

PRACTICAL SCHOOLROOM LESSONS.

(1) **Beginnings in First, Second, and Third Grades.** —

Talk to pupils about kindness to animals, particularly to dogs, cats, birds, and horses. Read extracts from "Black Beauty." Read short stories that have a moral wrapped up in them.

For Use by — Heart Culture, by Emma E. Page will prove a valuable assistant to teachers. The purpose of the author cannot be better expressed than by the following quotations from her preface: "The aim of this book is to teach kindness to animals by quickening sympathy for them, arousing a sense of justice toward them, and instilling the fundamental principles of right care of them. How to care for domestic animals is dwelt upon with considerable detail, because these things must be taught in school to get down into the family life of all the people. Not to know is often as cruel as not to care."

Fourth and Fifth Grades — Topics for Short Talks. — Put everything in its right place. Why? Have a regular time for home study. Why? Be punctual at school. Why? Why is it your duty to study your lessons? Kindness to children younger than yourself. Duties to other pupils. Duty to home and parents. Kindness to animals. Kindness to little children.

For Reference by Teachers. — Dewey's Ethics or Stories of Home and School. Thayer's Ethics of Success, Book I.

Sixth and Seventh Grades — Topics for Short Talks. — Topics may be brought before a class by reading some anecdote or story, or by means of conversation lessons. Fighting and quarreling. Calling nicknames. Truthfulness. Word of honor. Cheating. Promises. Profanity. Slang. Cruelty to animals. Courage. Duties at home. Duties in school. Duties to others.

For Reference. — Thayer's Ethics of Success, Book II.

Topics for Eighth and Ninth Grades. — Earning a living. The reading of good books. Economy. Patriotism. Obedience to law. Duties of American Citizens.

For Reference. — Thayer's Ethics of Success, Book II. Everett's Ethics for Young People.

HINTS ON LESSONS IN POLITENESS.

"A beautiful behavior," says Emerson, "is the finest of the fine arts. Give a boy address and accomplishments and you give him the mastery of palaces and fortunes where he goes."

It is too often assumed that children learn manners at

home, or unconsciously acquire a polite behavior from their teachers, schoolmates, or friends. But whatever they may learn through unconscious tuition, it is very desirable that they should receive specific instruction in politeness. It is said that the winning manners of Henry Clay were owing in no small degree to the careful training in manners given him at an early age in a log schoolhouse in Virginia.

Topics for Short Talks in Second and Third Grades. — Politeness to schoolmates. Politeness to teachers. Manners at the table. Politeness to parents. Politeness to brothers and sisters.

For Reference. — How to Teach Manners in the Schoolroom, by Julia Dewey.

Topics for Short Talks in the Fourth Grade. — Manners at home; at school; at places of amusement. Minor rules of politeness: (Adapted from Miss Dewey's How to Teach Manners in School.)

1. When you pass directly in front of any one say "Excuse me."
2. Never fail to say "Thank you" (not "Thanks") for the smallest favors.
3. When a schoolmate is reading, or is answering a question, do not raise your hand to correct a mistake until after he has finished.
4. Do not stare at visitors who enter the schoolroom.
5. When you stand to recite, stand erect like a well-bred gentleman or lady.
6. In handing a pointer, pen, or pencil, hand the blunt end towards the person to whom you wish to pass it.
7. It is impolite to chew gum or to eat in school.

Fifth Year or Grade—Topics for Short Talks. — When you do a favor, do it cheerfully. A cheerful countenance is always welcome. Give up your seat to older people. Apologize to any one you have wronged. Do not bluntly contradict any one. Look persons in the eye when you speak to them. Whispering in company is impolite. Avoid the use of slang expressions.

For Reference. — Gow's Primer of Politeness.

Sixth to Eighth Grades—Topics for Short Talks. — Rules of politeness in society. Politeness to strangers. Politeness in traveling. How to write notes of invitation and acceptance of invitations. How to introduce persons in a proper manner.

CHAPTER XIII

COMMON-SENSE APPLIED TO RURAL SCHOOLS

IT requires great tact and judgment to manage successfully a rural school in which the whole work is done by one teacher. In the graded schools of town and city the course of instruction is definitely laid down in printed manuals; the work of each successive grade is directed by principal and superintendent; the results are tested by written examinations; and each class teacher is only a cog in a complicated system of wheels. But in the country school the teacher combines the function of assistant, principal, examiner, and superintendent. He is an autocrat, limited only by custom, precedent, and textbooks.

When we consider that about one half of the school children in our country receive their elementary education in rural schools, their importance as a part of our school system is obvious. Many of these schools in the sparsely-settled districts of some states are kept open only from three to six months in the year, and even then the attendance is irregular. The whole schooling of many children, from the age of five to fifteen, hardly amounts to five years of unbroken school attendance. For such pupils, what instruction will best fit children for their life duties? What knowledge is of most worth to them? The subject under consideration is so important that it seems to require special treatment by itself. As an axiom, we may safely take this statement of John Stuart Mill:

"The aim of all intellectual training for the mass of the people should be to cultivate common-sense."

It is of the first importance that pupils should be trained to speak, read, and write the English language. At fifteen or sixteen years of age they should be able to read readily, to keep their conversation free from provincialisms in pronunciation, to write a letter in a neat and legible hand; and they should have a taste for reading good literature.

In arithmetic they should be trained to work examples in the "four rules"; to perform business operations in common and decimal fractions; to reckon simple interest; and to make out a bill, a receipt, and a promissory note; and to keep simple accounts. Wise teachers will concentrate their drill upon what the pupils most need.

In geography they should acquire a general knowledge of our own country and of the world as a whole; but it is not necessary that they should be compelled, term after term, and year after year, to memorize text-books. Present the subject in a natural way according to modern methods. Begin with a study of local geography from nature and proceed according to the methods presented in a previous chapter on geography in graded schools.

The text-book study of grammar should be preceded by a course of elementary exercises in language lessons, such as are found in the best modern text-books. Children cannot be trained to speak or write correctly by parsing according to Latinized formulas. They will never learn to construct a good sentence by analyzing complex or compound sentences, or by memorizing and repeating the rules of syntax, though this method be followed until they grow gray. Require, then, at least, one short composition exercise a week, upon subjects

about which the pupils have learned something. Let them write about farming, about animals, birds, fishes, flowers, trees. Read them short stories to be reproduced in writing. Require pupils over eight years of age to write at least one short letter a week, until they can write it in due form, punctuate it, capitalize it, spell correctly most of the words they use in it, fold it neatly, and direct it properly. After this preliminary work is well done, let the older pupils study grammar from a text-book, by taking up a few essential points in etymology, by learning to apply a few important rules of syntax, by taking a little parsing and a minimum of plain sentence analysis without diagrams, and with as little as possible of the scholastic forms of logic in which the subject is often enveloped.

Pupils should acquire a general knowledge of the leading events in the history of our own country. Teachers should present the subject by means of oral lessons, which will include stories, anecdotes, incidents, and well-selected extracts. Narrative and biography constitute the life of history to the young. A text-book may be used to supplement this work.

It will be one of the pleasantest of duties to awaken country children to the beauties of nature by which they are surrounded. It is here that teachers may do their best work, by drawing out of pupils all they know of the world around them, and by encouraging every effort to increase their knowledge. Country boys and girls generally have a considerable stock of crude knowledge about animals, plants, and the phenomena of every-day life. Draw out these fragmentary stores of facts, and supplement them by the facts of science. Set the girls to collecting and pressing plants and flowers. Let the

boys bring in specimens of minerals, shells, woods, and grains for a school cabinet. Open their eyes to the beauty of the world in which they live.

In the Report of the Committee of Twelve on Rural Schools (1897), Wilbur S. Jackman, of the Chicago Normal School, in a special paper on a course of study for rural schools, makes the following suggestions about nature study :

"In the earlier years, especially, great attention should be given to the picturesqueness and natural beauty of the surroundings. Without trained and careful effort in this direction, the intensely practical character of their contact with the various things about them will close the eyes of the children to many beautiful things that should be a source of joy and pleasure throughout life. Much out-door study should, therefore, be encouraged. The children should be familiar with every brook and waterfall ; with every cliff, wooded copse, and ravine."

From personal experience I deeply realize the force of Mr. Jackman's suggestions. In my boyhood I attended a village school in one of the mountain towns of New Hampshire. From the schoolhouse door we could see, not two miles distant, a granite mountain which rose to the height of more than a thousand feet. Away in the distant western horizon Mt. Kearsarge rose still higher. At our feet, not a stone's-throw from the schoolhouse, there flowed the winding Suncook River, an important tributary of the Merrimac. But nature study was unheard of when we boys went to school. None of us ever connected the mountains that we read about in the geography with the real mountains right before our eyes. We failed to assimilate the rivers traced in spider lines on the atlas with the clear-running stream in which we went a-swimming every day in the hot summer time. We boys never once thought of climbing to the summit of the mountain near by, though we could have reached it by a two hours' walk. No one of our teachers ever

thought of suggesting to us that it would be a good geography lesson to find out what we could see from that familiar mountain top. We were blind as bats to the beautiful panorama of nature spread out everywhere around us. No teacher ever once in all our lives called our attention to the mountain, or the river, or the ponds, or the farms, or the woods, or the beauty of the landscape. It was only after an absence of many years in California, that my eyes were opened to the wondrous summer beauty of my native town, a landscape of hill and mountain, farm and forest, unequaled by anything that I had seen in my distant wanderings. Then I climbed to the top of Cata-mount and looked out on the scenery that tourists travel hundreds of miles to behold. I brought away with me, as a special treasure, a piece of quartz delicately grooved and polished by the great glacial ice-mass that once moved over New England and sculptured the rough outlines of the varied landscape spread out in all its wondrous summer beauty.

In the appendix to the report of the Committee of Twelve there is a paper on "The Farm as the Center of Interest," by Col. Francis W. Parker, of the Chicago Normal School, which so graphically and truthfully sets forth the field for nature study in the country school that it cannot fail to prove an inspiration to all who read it. Among other things he says: "Nowhere on earth has a child such advantages for elementary education as upon a good farm, where he is trained to love work and to put his brains into work. The statement of what a farm does for a boy in its general lines may easily be taken from the experience of a farm boy in New England, for instance. It is possible for me to give the story of such a one from actual experience — what he learned, what he studied, and what he acquired. As soon as he found himself upon the farm, at eight years of age, he began to study — to study in the best sense of that much-abused word. He began the study of geography — real geography. He observed with ever-increasing interest the hills, valleys, springs, swamps, and brooks upon

the old farm. The topography of the land was clear and distinct ; its divisions into fields, pastures, and forests were to him the commonest facts of experience. . . . He studies botany. All the kinds of grasses he knew — timothy, clover, red top, silver grass, pigeon grass ; how they were sown, how they came up, grew, were cut, cured, and fed to the cattle ; what kind of hay was best for sheep ; and what for oxen. . . . He knew the trees, the maple with its sweet burden of spring, the hemlock, and the straight pine which he used to climb for crows' nests. He knew the wild animals, the squirrels, the rabbits, the woodchucks ; the insects, the grasshoppers, and ants ; bugs that scurried away when he lifted a stone. With the birds he was intimately acquainted.

" He observed, investigated, and drew inferences, perfectly unconscious, to be sure, of what he was learning, or how he was learning ; but still, he learned, and he studied, and the best lesson of all was his personal reaction upon his environment. His plowing, hoeing, haying, digging, chopping, lumbering, his mending of sleds, and making of cider, sugar, lye, and soap were all so many practical lessons in life which exercised his body, stimulated his mind, and strengthened and developed his purpose in life. He lived to become a school teacher, and taught school earnestly and bunglingly for twenty years before he had even a suspicion of the value of his farm life and farm work."

It is not necessary that you should teach ethics as a science. What pupils most need is that plain preceptive morality which is diffused among the people as their daily rule of action. Your work here must be an outgrowth of your own life and character, observation and experience, combined with the best thoughts you can glean from books and society.

It is desirable that pupils should know something about the laws of health in relation to diet, sleep, air, exercise, work, play, and rest. Teach the plain truth that sickness is the penalty of violated laws ; that bad habits are physical sins ; that poor health, unless hereditary, is the result of carelessness or ignorance. These things can be taught either with or without a text-book.

Teach drawing in a natural way by giving pupils a few hints, and then setting them at work in trying to draw from real objects, such as leaves, fruits, flowers, animals, birds, ships, boats, houses, and easy landscapes. There is a fine opportunity in the country school for allowing pupils to follow their individual bent. Allow a reasonable time for singing, recitals, dialogues, the reading of compositions, and other incidental exercises.

The arrangement and length of recitations are matters of judgment to be modified according to conditions. When one class is reciting, set the others about some specific piece of work at their desks. The few advanced pupils ought not to monopolize your attention. Assign older pupils lessons to be learned at home; for children who attend a school only a part of the year cannot easily be overtaxed with brain work. Train them to depend upon themselves, and to find out things by hard thinking. In recitations, explanations and illustrations must be condensed, for time is limited.

If there is a school library, make good use of it by recommending suitable books for pupils to read at home. Many a dull boy, lazy and listless over his lessons, has been made alive by books suited to his age and capacity.

If you have tact, good-nature, and firmness, and know how to interest children in their work, you need not have much trouble about order, discipline, or government. Win the good will of the older pupils, and they will become your assistants in school government.

On the morning of the first day, that crucial test of a teacher, introduce yourself by a few cheerful remarks, distribute slips of paper on which pupils are to write their names, age, class or grade, and studies; and, having collected these, proceed at once to business by giving out a

sheet of paper to all who can use a pen, and require them to write a composition about their last vacation. This will keep them at work an hour at least, during which time you can attend to the little ones, and make out your rough program. The art of the first day is to keep pupils busy. You will avoid much mischief by getting everybody hard at work in ten minutes after school opens. If you know how to tell a good story, close school with one; if not, read one from some book.

The true economy of teaching in an ungraded school is to make the fewest possible number of classes, and to consider both age and capacity in making the classification. If the school is a large one, do not attempt to hear daily recitations in everything, but alternate the studies of the more advanced pupils. Economize time and instruction by means of as many general exercises as possible, in which all except the youngest pupils can join; such as drill exercises in the four rules of arithmetic, mental arithmetic exercises, the spelling of common words, short compositions, review questions on the leading facts of geography and history. Take an hour, weekly, for select readings, recitals, dialogues, and lessons on morals and manners.

Occasionally give written examinations. In most city schools, written examinations are carried to extremes; but in most country schools there is not enough of written work to give readiness and exactness in the written expression of thought.

For a young teacher, whether man or woman, there is no better school of practice than a country school. Nor should the educational advantages of the rural school for pupils be underrated. In the long race of life, boys educated in such schools often come out ahead of those

ground out by the graded machinery of city schools. During a part of the year country boys work on the farm, and get, not only muscular strength, *but also a habit of work*. They go back to school with a keen relish for study, and a habit of steady application. Hard work on his father's farm, from sunrise to sunset, hoeing corn, or haying, or digging potatoes, has made school-life seem a play spell to many a boy, and has laid the foundation of steady habits that have led to success in life. The trouble with many city boys is that they have no work to do out of school, and never learn what hard labor means until school-life is over. Herein lies the great advantage of the country school; both boys and girls have a combination of mental and manual training. The morning and evening "chores" on the farm, and in the household, prevent undue mental application. Pupils are not surfeited with school and books; school, indeed, is a relief from hard labor. Many a man has reason to be thankful that he was trained to habits of farm work in his boyhood, and was sent to a country school, where he was not crammed to repletion, nor worried with credits, nor made wretched with competitive written examinations. In this connection, I cannot forbear quoting the following extract from the concluding paragraph of Col. Parker's paper in the appendix to the Report of the Committee of Twelve:

"No method, no system of schools, no enrichment of courses of study, not even the most successful of teachers, can ever take the place in fundamental education of the farm and the workshop. No matter how good the city schools may be, or may be made; no matter how good the state of society may be, the vital reinforcements of city life that lead to progress and prosperity, so far as we

can see, must always come from the sturdy stock of the farm. This fact, upon which most educators agree, puts upon the country school an immense responsibility. When skill, expertness, and insight control the methods of country schools; when excellent teachers remain in the same schools year after year, the already powerful influence of country life upon the destinies of the nation will be mightily enhanced."

Finally, perhaps the greatest service I can render student-teachers who are looking forward to a country school, is to call special attention to the Report of the Committee of Twelve on Rural Schools. This report of 227 pages is one of the most notable educational documents ever published in this country. In it the young student of pedagogics will find a detailed course of study, a report on Instruction and Discipline; a report on program; an enrichment of Rural School Courses; a Course of Study for Rural Schools, by Wilbur S. Jackman; the Farm as a Center of Interest, by Colonel Parker; the Country School Problem, by Dr. Emerson E. White.

INDEX.

- ACADEMIES, Age of, 64; endowed academies, 65; Phillips-Andover Academy, 77; Phillips-Exeter Academy, 64, 77.
Agricultural Colleges, 85-90; Agricultural College of Pennsylvania, 55.
Alaska, Schools in, 111.
American Institute of Instruction, 78.
Animal Life, Study of, 281, 282.
Appleton's Readers, 140.
Arithmetic, Methods and text-books in, 141-146, 191-194, 240-258, 304; Colburn's Intellectual Arithmetic, 122.
Armstrong, S. C., and the Hampton Institute, 99.
Athletics, 288.
- BAILEY, L. H., quoted, 280.
Baldwin's Readers, 141, 208, 215.
Baltimore, Schools of, 59, 116.
Barnard, Henry, 71.
Barnes, Earl, 121, 184, 290.
Benton, Thomas H., 62.
Berkeley, Governor, of Virginia, 29.
Bible, The, 135, 292, 295.
Bookkeeping, 253.
Books for children, 160-163, 215, 261, 263, 284, 294.
Books for school libraries, 263, 264, 265, 285, 301, 309.
Books for teachers, 158-160, 170, 200-205, 263, 270, 285, 312. See *Text-books*.
Boston, Schools in, 8, 12, 47, 56, 74, 111, 130.
Branches of Instruction, 118-120.
Brown's (Gould) Grammars, 150.
- CALHOUN, J. C., 62.
California, Education in, 101-110; high schools, 82.
Chicago, Schools in, 115.

Clay, Henry, 83.
Clinton, George, 50.
Colburn's Arithmetic, 145.
College of the City of New York, 52.
College of William and Mary, 29, 58.
Colleges, Colonial, 80. See *Universities* ; agricultural colleges, 83.
Agricultural College of Pennsylvania, 55.
Colonial Schools, 7, 36, 118, 141 ; colonial newspapers, 162 ; school laws, 22, 23, 26, 29. See *Legislation*.
Colored Schools, 97, 98, 99.
Columbia University, 25, 83.
Composition-writing, 77, 237.
Connecticut, Early schools in, 49.
Conservatism and Progress, 127.
Copy Books, 119, 218. See *Writing*.
Cornell University, 83, 86.
Correlation in Reading Lessons, 217.
Country Schools, 303-312. See *Rural Schools*.
Courses of Study, in high schools, 76.
Credits and checks, 188.
Curry, J. L. M., quoted, 94, 96.

DAME Schools, 20.
Dedham, Mass., Early Schools in, 10.
Defining, 224.
De Garmo, Charles, quoted, 128, 239, 267, 271, 275, 296.
Development Method, 195-198.

Dwight's Geography, 154.

EARLY American schools, 34-72, 118.

Eaton, John, quoted, 94.

Economy, True, in educational affairs, 168.

Elective Courses of Study, 58, 83, 127.

Eliot, Charles W., quoted, 84, 182, 186, 213, 257, 277, 284.

Emerson, George B., 74.

Endowed State Universities, 80.

"English Reader," Murray's, 139.

Enrollment in public schools of the United States, 164; in high schools, 75; in normal schools, 79.

Examinations, 186, 276, 310.

FARM, The, as a center of interest, 307; education of farmer's children, 66.

Federal Aid for higher education, 89.

First day of school, The, 174, 309.

Fractions, Teaching, 191, 242, 247. See *Arithmetic*.

Franklin, Benjamin, 28, 68.

Freedman's Bureau, The, 94.

Friends' schools, 28, 61.

Froebel, and the kindergarten, 125.

GAMES and plays, 289.

Geography, Early text-books in, 153-158; methods of teaching, 269-277, 283, 304; Redway and Hinman's geographies, 158, 271, 285.

Georgia, Early schools in, 60.

Girard College, 57.

Girls, Education of, 21, 60, 74; first academy for, 65.

Grammar schools, Early colonial, 8, 10.

Grammar, Text-books and methods in, 138, 146-153, 194-196, 304.

Grant, U. S., 72.

Greeley, Horace, 67.

Grube Method in arithmetic, 240.

Guyot's Geography, 158.

Gymnastics, 287.

HADLEY, Mass., Early schools in, 21.

Hall, G. Stanley, quoted, 178, 286.

Herbart Society, The, and Herbartian methods, 115, 221, 227, 231.
Higher Public Education, 73-92; in the South, 98-100.
Historical Records of Common Schools, 18.
History, Text-books and methods 259-268; in rural schools, 30.
Home education, 66.
Hornbook, The, 130, 131.

IMPERFECTIONS in school system, 167.
Improvements, Modern, in methods, of instruction, 124, 166.
Industrial education, 85-90.
Instruction, Branches and methods of, 118, 124. See *Methods*.
Inventions, Early, and their influence on education, 35.

JACKMAN, Wilbur S., quoted, 284, 306.
Jackson, Andrew, 62.
James, William, quoted, 196, 291.
Jefferson, Thomas, 30, 36, 58, 63.
Johnson, Richard Malcolm, 60.
Jordan, David Starr, quoted, 92, 299.

KEPHART, Horace, quoted, 32, 53.
Kindergartens, 125, 297.
Kirkham's Grammar, 150.

LANCASTRIAN schools in colonial times, 52, 55, 59.
Land Grants, 85; Land Reservations for Schools, 37, 39, 80.
Language lessons, 152, 232-236. See *Grammar*.
Legislation, School in the colonies, 22; in Ohio, 42; in Massachusetts,

- Literature in connection with American history, 266.
Lukens, H. T., quoted, 221, 227.
Lyon, Mary, 65, 68.
Lyte's Grammars, 239.
- MCALLISTER, James, 57.
McGuffey's Readers, 140.
McMurry, C. A., quoted, 183, 195, 198, 296.
Management in School Government, 120, 173-178, 309; in classroom, 179-187; in rural schools, 303-312.
Manhattan, Schools in, 23, 51, 56, 113.
Mann, Horace, 70, 74.
Manners and morals, 292-302.
Manual Training, 289.
Map drawing, 272.
Marietta, Ohio, 43.
Martin, G. H., quoted, 65, 71, 79, 141, 295.
Massachusetts, Schools in, 8, 23, 45, 46, 73, 75, 112.
Mayo, A. D., quoted, 60, 93, 97, 165.
Methods and text-books: Reading, 130-141, 207-212; spelling, 135-137, 207, 210, 222-225; writing, 119, 206, 218; arithmetic, 141-146, 191-194, 240-258; grammar, 138, 146-153, 194-196, 230-239; geography, 153-158, 269-277, 283; drawing, 225-228; music, 228; history, 259-268; general methods, 180-184, 188-191.
Military Academy at West Point, 91.
Mill, John Stuart, quoted, 184, 304.
Morals and manners, 292-302.
Morse's Geography, 154-157.
Mount Holyoke Seminary, 65.
Mountain States, Education in the, 110.
Muir, John, 121.
Murray, Lindley, 139, 146.
Music, Vocal, 228.
Mythology, Excess of in lower grades, 214.
- NATIONAL Schools, 90; a national university, 91.
Natural Geographies, The, by Redway and Hinman, 158, 285.
Natural methods in teaching geography, 269-277.
Nature Studies, 278-285, 305.

- Naval Academy at Annapolis, 91.
 Negroes, Education of, 96-100.
 New England, Education in, 7-23, 44, 64, 111; colonial school laws in, 22; normal schools in, 78.
 New Jersey, Early schools in, 53.
 Newspapers, Colonial, 162.
 New York, College of the City of, 52.
 New York, Schools in, 23, 46, 49, 56, 71, 111-114; normal schools in, 77.
 Normal Schools, 77-80, 83, 108; public normal schools, 78; statistics of, 79; private normal schools, 80; state normal schools in California, 108.
 North Carolina, Schools of, 60.
 North Central States, Education in, 114-116.
 Northwest Territory, 37; ordinance of 1787, 38; land system, 39; schools in, 43, 71, 80, 114.
 OHIO, First permanent settlement in, 42; early schools in, 43.
 Ordinance of 1787, for Northwest Territory, 38.
 Oregon, Schools in, 110.
 Outlook, Educational, 164-170.
 PACIFIC States, Education in, 101-111; state legislation in California, 102, 104, 105; school beginnings, 102; parochial schools in San Francisco, 105; normal schools, 108; state publication of textbooks, 109; the mountain states, 110.
 Parish schools, 27, 49.
 Parker, Francis W., quoted, 230, 245, 251, 277, 307, 311.
 Peabody, George, 94; Peabody Educational Fund, 95.
 Pedagogics, Applied, 204; books on, 158-160, 170, 200-205.
 Pedagogy, Departments of, in state universities, 83. See *Normal Schools*.
 Penn, William, 26.
 Pennsylvania, Schools in, 26, 46, 53, 111.
 Periodicals, Educational, 78.
 Philadelphia, Schools in, 55, 57, 113.
 Phillips-Andover Academy, 64, 77; Phillips-Exeter Academy, 64.
 Physical Culture, Modern Views on, 286-291.
 Physical Geography, 283.

- Physics, 283.
 Physiology and Hygiene, 282.
 Pike's Arithmetic, 142-145.
 Plants, Studies of, 280, 281, 282.
 Plymouth Colony, Schools in, 7, 17, 18, 22.
 Politeness, Lessons in, 301.
 Practical value of common schools, 67.
 "Primer, The New England," 62, 131-134.
 Princeton, University of, 53.
 Program, 187, 310.
 Promotions, 185, 276.
 Psychology, 202; psychological principles, 221.
 Public School Society, The, 52.
 Punishments in school government, 120, 161, 177.
 Puritans, Schools and educational ideas of the, 8, 30.
 QUAKERS, Schools and education among the, 26, 28, 61.
 Question and Answer, 180.
 READING, Methods and text-books in, 130-141, 207, 208-212, 215-217, 304.
 Reading and Study, Professional, 158-160, 199-205, 312.
 Recitations, 121, 180, 188-198, 309.
 Records, Historical, of common schools, 18; of grammar schools, 10.
 Reform, Educational, 256.
 Revolutionary War, Effects of, on Education, 31, 34.
 Rural Schools in colonial times, 15; in the South, 61; in New England, 15, 66; common-sense applied to, 303-312.
 ST. LOUIS, Schools in, 115, 126.
 Salaries, Teachers', 120.
 Salem, Mass., Early schools in, 13, 21.
 San Francisco, History of schools in 102-105, 124.
 Schlee, E., quoted, 190.
 School committee, 11.
 "School Keeping, Lectures on," Hall's, 77.
 Science, Natural, and geography, 276.
 Scotch-Irish, The, in America, 27, 33, 50, 58, 59, 61.
 Secondary and higher public education, 73-92.
 Sherman, Roger, 68.
 Slater Fund, The John F., 96.

- South Carolina, Schools in, 59.
 Southern States, Education in, 58, 93-101, 116.
 Spelling Books, 118, 135-137.
 Spelling, Methods of teaching, 135-137, 207, 210, 304.
 Spencer, Herbert, quoted, 293.
 State control of schools, 37; state public universities, 80; state normal schools, 79; state agricultural colleges, 86.
 Stevens, Thaddeus, 54.
 Study, Courses of, 118-120, 123-129; habits of, 181-183, 310.
 Supplementary Reading, 208, 212, 215, 261, 263, 264, 266, 284.
 Swinton's Readers, 141; Grammar and Language Lessons, 153.

 TABOR, F. H., quoted, 289.
 Taxation for Support of Schools: In the South, 100; in California, 107.
 Text-books, State publication of, 109; studies on, 130-163; use of, 189-197. See *Methods and Text-books*.
 Tompkins, Arnold, quoted, 181, 187.
 Township, Congressional, Division of, 40.
 Training Schools, 77, 81. See *Normal Schools*.
 Tuskegee, Normal Institute, 99.

 UNGRADED schools, 303-312.
 Universities, State, 80-85, 108.
 University, A National, 91; California, 82, 108; Columbia, 25, 83; Cornell, 83, 86; Harvard, 8, 83; Michigan, 82; Princeton, 53; Purdue, 87; Texas, 82; Yale, 83.

 VIRGINIA, Schools in, 29, 58.
 Vocal music as a means of culture, 228.

 WASHINGTON, Booker, T., 100.
 Washington, D. C., Schools in, 116.
 Washington, George, 29, 30, 63, 92.
 Webster, Daniel, 68.
 Webster, Noah, 118, 135, 137, 140, 148.
 West Point, Military Academy, 91.
 White, E. E., quoted, 186.
 Willard, Emma H., 65.
 William and Mary, College of, 29, 58.
 Willson's Readers, 140.
 Writing, 206, 218. See *Copy Books*.
 YALE University, 83.

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